

AMRAZ KABID (HEPATIC DISORDERS) IN CLASSIC LITERATURE OF UNANI SYSTEM OF MEDICINE

(Part-III)

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(Continued from the previous issue..)

Section 23: *Istisqa* (Ascites)

Ascites is accumulation of serous fluid in peritoneal cavity. *Istisqa* is a *Maaddi* disease caused by *Maadda Ghareeba* (Foreign substances) which gets into tissue fibers of the organs and continues increasing in amount. The accumulation is either in the external tissues like skin and external spaces or in the internal spaces and cavities where alteration in the diets and humors occurs. There are three types of ascites:

1. *Istisqa Lahmi* (cachexic oedema/ Anasarca): A type of swelling of the body due to cachexia. It is a generalized and massive oedema of the body. It is caused by watery, phlegmatic matters which spread in all organs with blood.
2. *Istisqa Ziqqi* (Abdominal dropsy, Water sac type, ascites): Collection of fluid in the peritoneal cavity. It is due to increased transudation from portal vein. It is caused by the accumulation of serous fluids in organs and lower cavities of the body.
3. *Istisqa Tabli* (Tyimpanites, drum type, ascites succatus): Collection of condensed gases or mixed fluid in the abdominal cavity. It is caused due to impaired digestive function of the body. It is caused by the accumulation of flatus in organs with cavities of the body.

Some causative factors and symptoms are common to all three types and some are specific to one of them. No ascites occurs without the defect in the liver or in the organs neighboring the liver. The defect in liver may be found without ascites but not the vice versa.

Causes:

Some causes directly related to the liver.

Some causes in which liver is partially involved with other organs

1. The causes directly related to the liver.

i. Exciting cause:

Most important of all is weak hepatic digestion and this is the sole exciting cause of ascites.

ii. Predisposing causes (*Asbab Sabiqah*), it includes all diseases of liver whether it is *Azvi* (organic) or *Mizaji* (Temperamental)

A. Organic causes: *Sighr* (Atrophy of the liver), *Sudda* (Obstruction or embolism), all types of swellings hot, cold, flaccid or wet which obstructs the opening of the vessels, hardness of *Safaq* (Peritoneum). Organic causes have been described in detail.

B. *Mizaji Asbab*: inflammatory, dryness and coldness, all these gradually tend to dissolve the *Hararat Ghareezi* (Vital heat). Reduction of the *Hararat Ghareezi* may also occur due to heat or cold like drinking cold water before breakfast or just after bathing or just after coitus, it is also caused by intense evacuation like sweating, increased secretion of urine, purging, menstruation or hemorrhoid and the most dangerous is hemorrhage.

2. Causes in which liver is partially involved with other organs:

It may involve the body as a whole or a particular organ like mesentery, spleen, stomach or kidney.

Diseases of other organs that may cause *Istisqa* leading to worsening of the liver:

Diseases of lung: asthma, cough etc

Diseases of Stomach: Diarrhea due to *Sue Mizaj* and coldness of the stomach,

Diseases of Spleen: enlargement of the spleen due to hard or soft swelling, or severe excretion of Sauda from spleen that leads to the weakness of liver. Enlargement of the spleen causes *Istisqa* and the weakness of liver by two ways one it absorbs immense materials from the liver and snatches the strength from liver, second it breaks down the power of liver and prevents from production of pure blood.

Diseases of Kidney: Coldness, heat, embolism or hardness of the kidney, so the kidney can not absorb the water and causes *Istisqa* even though liver has no ailment.

Diseases of Intestine: Pain, cramp, colic, erosion of Intestine can weaken the liver.

Diseases of Uterus: amenorrhea, pain of the uterus.

Diseases of Rectum: Retention of hemorrhoid blood. Similarly the diseases of other organs also contribute in developing ascites.

Mostly the lesion in the organ of alimentary canal cause weakness in the concavity of the liver while the lesion in the urinary and respiratory organs cause weakness in the convexity of the liver. Mostly the organs that contribute with the liver to cause *Istisqa* are kidney, spleen, mesentery and stomach.

The worst type of ascites is one which is associated with an acute hot disease, some regard *Istisqa Lahmi* the worst because here the liver, vessels and muscles of the body are affected even three stages of digestion, gastric, hepatic and intestinal are disturbed. but the preferred opinion is that *Istisqa Ziqqi* (Water sac type) is worst followed by *Lahmi*, it also depends upon the etiology.

Ascites is most dangerous in the persons of dry nature because such persons are not affected with the disease of opposite nature (Wet nature) unless there is a big ailment. Ascites due to hardness of spleen is milder than that caused by hardness of liver as it easily responds to the treatment. Sometimes ascitic materials are produced in large amount that it causes cough, asthma and difficulty in breathing, it is a dangerous sign and may result in death. Ascitic patients nearing to death often suffer from ulcers in the mouth and gum due to foul vapor and last stages suffer from ulcer over whole body due to *Suc Mizaj* (septic infection) of blood. Ascitic patient if excretes flesh like materials in stool is indicative of death likely. A melencholic patient if develops ascites, his melancholia will disappear. The reason behind it is that melancholia is always due to dryness and humidification by ascites counteracts this dryness and melancholia is cured.

Diarrhea is always a serious sign in ascites.

Note: it is better to know the organs from which the swelling and flatus production started, it may be pelvis, feet, back, kidneys, loin or stomach. Whether the nature is soft or dry? Dryness is better especially in the case where swelling started from the loin or kidneys. Often softness is present in the case where swelling started from the loin while mostly dryness is present in the case where swelling started from the feet. It should be known the condition of the pelvis whether it is weak or strong and about the scrotum's involvement in the swelling should also be known.³⁰

Causes of *Istisqa Ziqqi* (Abdominal dropsy or water sac type Ascites)

Exciting cause is that *Maiyat* (Fluid) gets excessive in the body or there is any obstruction, in both cases the fluid diffuses out of the vessels and produces ascitis. *Quwat Dafia* of liver

which sends out waste products to the excretory organs and *Quwat Jaziba* of the kidneys which excretes excess of fluids both are weak, then the obvious result will be that excess of diffused fluid will accumulate in tissues, cavities or spaces.

Similarly if there is obstruction in the passage especially when there is a hard swelling in the kidney, the same result of accumulation of fluid will follow even merely the defect in kidney can produce the ascites.

Drinking of too much water and liquids can not be coped with by the weak *Quwat Mumayyiza* (Power of separation and expulsion) of liver and results in ascites. It may occur in severe thirst that is caused by ill nature of the liver or saltiness.

Any swelling or *Suddah* in the vessel will obstruct the excretion of fluids from the liver, it will accumulate and cause ascites.

Hippocrates has said that if a patient of the ascites holds abundant phlegm in between stomach and diaphragm it becomes painful and when it reaches to the bladder by absorption through the vessels, it is excreted by urine and the patient gets rid off the ascites. Galen has said that phlegm should descend into pelvis not in the bladder because in the later there may be exudation of the fluid. Sometimes there is ulcer in the stomach and becomes perforated, at that time the stomach gets distended like an ascites because heaviness occurs and enlarges it. If perforation occurs in upper part of intestine, the death occurs immediately.

Causes of *Istisqa Lahmi* (General dropsy, Anasarca)

Exciting cause: Defect in third stage (Hepatic) digestion, so digestion of food to form blood is not complete; excess of this unutilized blood will lead to accumulation of fluid (Ascites). Many a time the faulty digestion in second stage (intestinal) or first stage (gastric) or it is due to faulty diets. When *Quwat Hazima*, *Masika* and *Mumayyiza* of liver is weak and absorptive power of the organs is increased and digestion is weak then there will be more accumulation of the fluid resulting in edematous ascites. This is probably the edematous condition of severe anemia due to defective nutrition.

Sometimes *Istisqa Lahmi* occurs due to coldness of liver or other responsible organs when there is no *Warm* or *Suddah*. Sometimes *Istisqa Lahmi* occurs due to heat which melts the body and humors and in presence of obstruction these humors can not be excreted through the kidneys hence they spread to the various organs and may get accumulated.

Loose motion is much beneficial in *Istisqa Lahmi* as it is an effort of the body to expel the fluid but sometimes the body is incapable to do it due to some reasons

sometimes Quwat Dafia divert the fluid towards liver and liver is unable to accept it due to weakness or plenty of fluid or any obstruction then this fluid accumulates in the body and causes ascites.

Hippocrates has written that if a patient's liver is filled with the fluid and it is burst then fluid is collected in the abdominal cavity, the death is certain. Galen while explaining the statement has said that it refers to fluid in the large vesicles that appear on the surface of the liver and the fluid of these vesicles enter the abdominal cavity after bursting, and it rarely enters inside the peritoneum, sometimes such patient survive despite the ascites because the fluids get absorbed either due to treatment or naturally.

Avicenna considers that such patients will die because this is toxic fluid and it will affect the liver, peritoneum and abdomen and when the liver is already weakened this additional poisoning will result into death.³¹

Causes of *Istisqa Tabli* (Tympanites, drum type)

Exciting causes: Defect in first stage (gastric) digestion, this digestive deficiency may be either weakness of stomach or faulty diets. When these undigested foods are acted by weak and deteriorated heat it turns into vapors and gases probably due to fermentation and putrefaction. These vapors and gases will produce pain and cramp in the stomach and neighboring organs.

A diet which is not properly digested in the stomach due to cold and moist nature is not fit to be digested further in the liver.

Sometimes intense heat in the liver converts the digestible foods into vapors and gases by abnormal actions before digestion occurs and the stomach and bowels get filled with the flatus and swell like a drum with hyper resonant note on percussion. Sometimes such conditions of hyper resonant swelling arises in the last stages of epidemic fever and other acute diseases, this state is always dangerous.

Symptoms Common to all types of *Istisqa*

1. There is a change of color of body in all types of ascites,
2. Colour of spleen will turn into green and black,
3. Edema on feet due to weakness of innate heat and liquidity of the blood,
4. Puffiness of the eye and then other peripheral organs,
5. Intense thirst and dyspnea in the later stages
6. Lack of appetite,
7. Scanty urine with high colored inclined towards redness,

8. Fever,
9. Eruption of rashes containing yellow fluids,
10. Diarrhea in *Tabli* and *Lahmi* type,

If ascites occurs due to inflammation of liver, there is intensification of *Mizaj*, edema of the feet and dry cough, edema is also on the right and left side sometimes they suddenly disappear, it mostly occurs in *Ziqqi*.

If ascites is beginning from both loins and lumber regions, edema initiates from the feet and there is prolonged diarrhea without excretion of materials causing ascites,

Ascites caused by heat is associated with its symptoms like intense thirst, inflammation, yellow colour of skin, bitterness of mouth, severe dryness of the body, lack of appetite, yellow and green colour of vomiting and in the latter stage burning micturition may be due to heat.

Ascites caused by hard swelling is diagnosed by its symptoms and diarrhea that follows, lack of appetite.

Ascites due to *Warm Harr* begins from the liver either concave side or convexity associated with all symptoms of acute swelling.

Ascites caused by spleen has green colour and spleen diseases. There is no lack of appetite in ascites caused by spleen or kidney unlike in liver.

Ascites caused by kidney may have been preceded by the diseases of kidney like swelling and ulcers.

Symptoms of *Istisqa Ziqqi* (Water sac)

1. There is feeling of heaviness in the abdomen,
2. Dullness on percussion instead of resonant note,
3. On shifting of side, splashing sound is heard with gurgling
4. On palpation it is felt like touching of water sac.
5. Individual organs do not enlarge but get shrunken unlike in *Lahmi*,
6. The skin of the abdomen is stretched and tense and a peculiar shine appears over it
7. Sometimes penis and scrotum also become edematous.
8. The pulse is small, regular, inclined towards hardness but when fluid is increased pulse is inclined to softness

Ascites may arise after expulsion of a calculus from urinary system without any sign of liver involvement then it may be due to the rupture of the either of ureters (a pair of thick-walled tubes that carry urine from the kidney to the urinary bladder).

Symptoms of *Istisqa Lahmi* (Edematous)

1. The whole body gets swollen like a corpse,
2. there is a pitting on the pressing the site,
3. Sign of free fluid neither in the abdomen nor umbilicus is protruded as it occurs in *Ziqqi* and *Tabli*
4. Often there is diarrhea with whitish stool
5. Pulse becomes broad, soft and Mauji (wave like)

It is reported that if such patient gets flaccidity in the body and in left hand and there is itching in the nose at the start of this sign, the death is likely to occur within three days.

Symptoms of *Istisqa Tabli* (Drum type)

1. Protrusion of umbilicus is prominent
2. no such feeling of heaviness as is felt in *Ziqqi* but sometimes feeling of stretching is more marked in this case of *Tabli*
3. The muscles are so stretched and tense that they appear to be contracted,
4. There is no swelling of the organs as in *Lahmi* type.
5. On percussion of the abdomen there is hyper resonant note like a drum.
6. The patient desires burping constantly and feels relieved by belching and passage of flatus.
7. The pulse is quick, regular and inclined towards hardness.
8. There is no edema of the feet

Treatment of *Istisqa Ziqqi* (Water sac)

1. The main objective in this case should be to dry up the fluids and to expel the waste matters even it is done by sunbath without the exposure of cold wind. Likewise exposure to wood fire also causes drying.
2. Dilatation of the pores, avoidance of water, persistent use of diuretic and soft purgative, patience on thirst, complete prohibition of water even sight of water, reduction and attenuation of foods are among the best treatment. If drinking water is needed a small amount can be taken after meal mixed with syrup.
3. Light exercise suitable to the patient, strengthening of power by using nutritious foods and fragrant condiments and medicines are advisable. Emesis before meal with alternate days and to induce sneezing by use of snuff is also beneficial.

4. Venesection should be avoided as far as possible except when there is retention of waste blood, because venesection causes coldness to the liver and it deprives the organ from nutrition and in ascites the organs are already deprived of the nutrition.
5. If ascites is accompanied with the swelling of the liver the swelling should be treated first.
6. The ascites due to hard swelling of the liver is very difficult to cure because after tapping out the fluid reaccumulates again and again. Therefore it is better to excrete the fluid by use of drugs not by tapping and it should be done in absence of fever. Sometimes there is reduction in the amount of fluid by excretion but due to persistence of hard swelling ascites recurs again.

Astringent drugs like Qurs Zarishk (*Berberis aristata*) etc should be reduced. Oil of pistachio and almonds are beneficial in all types of *Istisqa*.

7. Drugs helpful in this *Istisqa*:

1. Rewand Chini (Rhubarb, *Rheum officianale* Baillon.)
2. Qust (Costus root)
3. Habbul ghar (*Laurus nobilis*)
4. Hulba (*Trigonella foenum-graecum* Linn.)
5. Turmus (Lupine, *Lupinus albus*)
6. *Raasan*
7. Juntiana (*Gentiana lutea* Linn.)
8. *Behroza* (*Pinus longifolia*)

Biskhopra (*Trianthema portulacastrum* Linn.) and *Unsil* (*Scilla indica*) one part and alcohol four parts are heated in clean earthen pot till it reduced to one fourth of alcohol and it is used. According to some physicians, use of *Tiryag* with the decoction of *Mentha arvensis* Linn., for 21 days is also effective.

8. Compound drugs beneficial in this *Istisqa*:

1. Kalkalanaj,
2. Dawa al Lak Maghsool (*Cateria lacca*),
3. Dawa al Kurkum,
4. Dawa al Isqeel,
5. Jawarish Sosan,
6. Syrup of Unsil,
7. Tiryag,
8. Qurs Shibram

Qurs Shibram is prepared by pounding and mixing of *Shibram* and yellow *Haleela* (*Terminalia chebula* Retz.) in equal amounts. Dose: 3 gm is given every fourth day and in between *Qurs Zarishk* (*Berberis aristata*) is given.

For expulsion of fluids purgatives are used.

9. Enema and suppositories are better as they do not upset the general condition. Likewise bathing with water in which *Mulattif* drugs like *Matricaria chamomilla* Linn Chamomile (Babuna,) and *Izkhar* are boiled.
10. Different types of *Marukh* (embrocation), fomentation and poultice are adopted. Camel milk is most suitable to *Ziqqi* type of ascites if it is given with *Tabasheer* (*Bambusa arundinacea*), *Mazryun* (*Mezereon*, *Clitoria ternatia*) and *Kalakalanaj* for a week but it is not advisable for hot nature patients.
11. Drugs harmful to the liver should not be included in purgatives and purgation is done gradually little by little. Aloe alone is harmful to liver so it is avoided. After purgation no food is given for a day provided the patient can tolerate this starvation then it is followed by tonic and little astringent drugs like *Qurs Zarishk* (*Berberis aristata*) and fruits juices to strengthen the liver. Then corrective for *Mizaj* are used like *Tiryag* and *Dawa al Kurkum* for cold nature, *Arq Kasni* for hot nature.
12. In hot condition, bile should not be purged because it resists the ascites except when there is plenty of *Safra* then it should be excreted by use of *Haleela*.
13. Excessive evacuation is harmful. Best laxative are chicken soup, *Bisfajj Fustuqi* (*Polypodium vulgare* Linn), Common dill (*Anethum graveolens* Shibbat), camel milk and whey water. When fluid is lessened and swelling is reduced then abdomen wall is cauterized so that no collection of fluid recurs.

Milk is a useful medicine as it has the quality of cleansing and purifying. If milk causes no trouble it should be continued but care should be taken that caseation does not occur.

Useful diuretic drugs: *Fitr asalyun* (Karafs Kohi), *Nankhwah* (Ajwain Desi, Kamun, *Trachyspermum ammi*), *Fodanj*, *Asarun* (*Asarun europium*), *Razianaj*, *Karafs*, (*Apium graveolens* Linn.) seeds, *Sasalyus*, *Anjadan* (*Asafoetida*), *Kamafitus* (*Kakronda blumea balsamifera* Dc.), *Acorus calamus* (Waj Khurasani) *Sunbul* (*Nardostachys jatamansi*), *Duqu* (*Peucedanum grande*), *Halyun* seeds (*Asparagus officinalis* Linn.), *Carrot root*, *Kakanj* (*Physalis alkekengi*). Among all these drugs a drug should be used one after another after pounding well, dependence of only one drug of diuretic is not desirable. After use of strong diuretic, a fatty soup of chicken should be given.

Zamad:

Sanobar gum (*Pinus gerardiana*), Wax, fresh Zufa (*Hyssopus officinalis*), Zuft (*Pinus gerardiana*), Samagh Butum (Gum of *Pistachia terebinthus*) all 3 parts, Meea Sailsa (*Altingia excelsa*), Mastagi (*Pistacia lentiscus*), *Aloe barbadensis* (Sibr Saqutri), Zafran (*Crocus sativus*), Afsanteen (*Artemisia absinthium* Linn), Ushuq (Gum ammoniac) all 2 parts, Castoreum (Jund Bedastar), sulphur, flake of fish skin, each one part, All these drugs are mixed with *Matricaria chamomilla* Linn Chamomile (Babuna,) oil and prepared *Zamad* for local application over abdomen.

In case of liver enlargement paste of following drugs is useful:

1. Sunbul (*Nardostachys jatamansi*)
2. Zafran (*Crocus sativus*),
3. Habbul ban (Neem, *Melia azadirachta*),
4. Mastagi (*Pistacia lentiscus*),
5. Iklil al Malik,
6. *Matricaria chamomilla* Linn Chamomile (Babuna, oil Chamomila)

All these drugs are made into paste with scented oil and applied.

Ingredients of ointment:

1. Marqsheesha (Sonmukhi)
2. yellow sulphur,
3. *Natrun*,
4. Ushuq (Gum ammoniac),
5. Kamun,
6. Wax,
7. Ilak al-Butum (*Pistachia terebinthus*)

All these drugs are mixed with alcohol and applied over abdomen. ³²

***Kanturi's* Prescription:** This *Arq* is tested and much effective, ingredients:

Post Bekh Karafs, (Rind of the root of *Apium graveolens* Linn.), Post Bekh Raziana (rind of the root of Fennel), Ghafis (*Agrimonia eupatoria*), Afsanteen (*Artemisia absinthium* Linn) Rumi, Lak Maghsool (*Cateria lacca*), Mur Makki (*Commiphora myrrh*), Qasbuz Zareerai (*Swertia chirata*), Qust (Costus root) Sheeri, Rewand Chini (Rhubarb, *Rheum officianale* Baillon.) Izkhar (Rusa grass *Andropogon shoenantus* Linn.), seeds of Razianaj (*Foeniculum vulgare*) and Karafs, (*Apium graveolens* Linn.), Aneesun (*Pimpinella anisum* Linn), Mastagi (*Pistacia lentiscus*), ³³

Method of preparation of Arq:

All above drugs are cleaned and coarsely powdered. Some quantity of water is added to the drugs for soaking and kept over-night. This makes the drugs soft and when boiled releases the essential volatile principles easily. The following morning it is poured into the distillation apparatus and the remaining water is added and boiled. The vapour is condensed and collected in a receiver.

Kanturi's Zamad: *Handaquqi* (Biskhopra (*Trianthema portulacastrum* Linn), white ginger and *Brassica nigra* Linn. is pounded with old vinegar and applied over the liver. It is tested and found very much effective.

Treatment of Istisqa Lahmi (Edematous type)

Basic principles for the treatment of ascites should be kept in mind. Some points mentioned in the treatment of *Ziqqi* may be effective in *Lahmi* type of ascites.

1. Venesection is needed when there is a congestion of blood or stoppage of menstrual blood and hemorrhoid. It is only *Lahmi* type of ascites where *Fasd* is beneficial. If ascites is caused by heat then venesection should be done to remove the purulent materials and cleanse the vessels. It will improve the condition of liver and bring it to normalcy from inflammation.
2. In case of fever, *Fasd* and purging should be avoided. Qurs Shibrum is beneficial. Diarrhea and gargling to cleanse the brain are useful even purging by Rewand Chini (Rhubarb, *Rheum officianale* Baillon.) pills is also beneficial unless there is contraindication.
3. Moderate exercise like walking, sweating induced by sun bath to get rid off excess fluid is also useful. Anointing with the oils like of Qissaul Himar (*Luffa echinata*) is beneficial. Cold exposure should be avoided. Dawa al Lak Maghsool (*Cateria lacca*), Dawa al Kurkum, Kalkalanaj, use of purgatives, diuretics, tablets made of *Ghafis Gentiana olivierii* Griseb. (*Agrimonia eupatoria*) with *Ab'hal* (*Juniper communis*), *Sikanjabeen Bazuri*, Vegetable juice are also effective.

Simple drugs mentioned in *Ziqqi* are also useful in *Lahmi* type ascites like *Sakbeenaj* (*Ferula foetida* Regel. persica), Mazryun (*Mezereon*, *Clitoria ternatia*) and decoction of *Ab'hal* (*Juniper communis*), Nankhwah (*Ajwain Desi*, *Trachyspermum ammi*), salt of *Tabar zad*.

Diets: Precautions are same as described in *Ziqqi*.

Treatment of *Istisqa Tabali* (Drum type Ascites)

General principles:

1. When accumulation of flatus is caused by retention of moist humor, it should be evacuated; sometimes excretion of fluids and diuresis is also needed as in *Ziqqi*.
2. If it is caused by stomach weakness then it should be rectified first and the liver is also corrected by use of liniments. *Fasd* should be avoided.
3. Bowels are kept cleared by milk laxatives. Carminatives, diuretics and other drugs causing eructation are also used.
4. The abdomen should be fomented with heated barley or husk of wheat.

Istisqa Tabali with *Sue Mizaj Harr*:

Decoction of Razianaj (*Foeniculum vulgare*), Karafs, (*Apium graveolens* Linn.), Ikleel al Malik (Nakhuna, *Trigonella uncatata* Boiss.), *Matricaria chamomilla* Linn Chamomile (Babuna,)

Istisqa Tabali with *Sue Mizaj Barid*:

Decoction of *Kamun* (*Trachyspermum ammi*), Aneesun (*Pimpinella anisum* Linn), and Castoreum (Jund Bedastar) is useful. Chewing of *Kamun* and *Kundur* (*Boswellia serrata* Roxb, Olibanum) is also beneficial. Oil of Suddab (*Ruta grveolens*), Karafs (*Apium graveolens* Linn.) and Darcheeni and decoction of carminative seeds are much effective.

Section 24: *Bazl* (Tapping):

Tapping of the fluid from the abdomen should be avoided till other options are available but it can be done if the patient is strong; can follow some moderate exercise, can tolerate thirst and hunger. In tapping care should be taken that all the fluid is not drained out in one sitting but in different sitting little by little otherwise patient may collapse due to sudden loss of power.

Method of tapping: the patient should stand erect if he can, otherwise should sit down erect; an assistant should slowly press upon the ribs so as to press the fluid down. Tapping should be done three fingers below the navel slightly left if the cause in liver or in right side if the cause in spleen. While puncturing, the hole of the peritoneum should be slightly below the hole of the skin. During drawing of fluid, the patient carefully monitored for any signs of fainting and as soon as sign of weakness appear draining should at once be stopped.

If patient is unable to sit erect, tapping should not be done. Sometimes fluid is descended and accumulated in the scrotum and fluid is drained out of the scrotum by one or more repeated tapping and this method is preferable to remove the disease. Sometimes the

patient may complain of cramp and pain in the abdomen after tapping, then the oil of Common dill (*Anethum graveolens* Shibbat) and *Matricaria chamomilla* Linn Chamomile (Babuna,) should be gently massaged over the abdomen and applied with the paste made with the seeds of *Linum usitatissimum* Linn. (Katan), *Trgomella foenum-graecum* Linn. *Hulba* and *Khitmi* are applied over the site. In mild cases only douching the outside of abdomen with hot water is enough.

Formulation: Maul jubn (Whey water) 1 ritl or 480 gm, Lahori salt 4 gm, and powdered Turbud Safed (*Ipoemea turpethum*) 20 gm are boiled on simmer fire then it is cleaned of froth and given to the patient starting with 130 gm and increasing gradually till whole 480 gm is finished. It helps in reduction of ascetic fluids.

Majun prescribed by some physicians:

Kasni seeds, Kasus (*Cuscuta reflexa* Roxb. seeds), extract of Tarahshaquq, extract of Zarishk, *Berberis aristata* (Rasot), Lak Maghsool (*Cateria lacca*), Rewand Chini (Rhubarb, *Rheum officianale* Baillon.) Extract of Afsanteen (*Artemisia absinthium* Linn), Extract of Qissaul Himar (*Luffa echinata*), Shaham Hanzal (*Citrullus colocynthis* Shrad.), Ghareequn (*Agaricus campestris*), All these drugs are powdered and mixed with the confection of Rose and given with juice of vegetables.

Another formulation: Copper filings, *Mazryun* (Mezereon, *Clitoria ternatia*) leaf and *Aneesun* (*Pimpinella anisum* Linn) are taken together and powdered the tablets are made. One tablet is given to eat.

Another formulation: *Habbul Shasa*, *Habbul Bahram*, *Habbul Khamsa*, *Sakbeenaj* (*Ferula foetida Regel. persica*), *Mazryun* (Mezereon, *Clitoria ternatia*) are beneficial for *Ziqqi*. *Habb Zaravand* is beneficial for *Lahmi*. *Habb Muqil* (*Commiphora mukul*) and *Habb Shibrum* are also among them which are mentioned in Qarabadeen.

Ingredients of *Habb Shibrum*:

Milk of Shibrum, Sunbul (*Nardostachys jatamansi*), Turbud Safed (*Ipoemea turpethum*), extract of Afsanteen (*Artemisia absinthium* Linn), Ghareequn (*Agaricus campestris*), red rose. All these drugs are powdered and made tablet with the juice of Mako (*Solanum nigrum*) and given to eat, it is much effective.

Hammam Yabis (Dry bath) is also beneficial for such patients. Bathing with water in which drugs like sulphur, Bauraq, Asnan, Brassica nigra Linn and dates seeds are dissolved, is also useful.

Mizaj Harr is treated with *Tabreed*. The physician should try to reduce *Warm, Istisqa* and fever, for this purpose juice of drugs like Mako (*Solanum nigrum*), Kakanj (*Physalis alkekengi*), Karafs, (*Apium graveolens* Linn.), Filifil and *Tarahshaquq* (*Kasni bitter*) mixed with Mur Makki (*Commiphora myrrh*), Lak Maghsool (*Cateria lacca*), Zafran (*Crocus sativus*), Rewand Chini (Rhubarb, *Rheum officianale* Baillon.), and *Haleela Zard* (*Terminalia chebula* Retz.) should be used.

Galen has written about the cure of hot ascites: ‘an old aged friend of mine suffered from ascites *Ziqqi* with heat and weakness. I advised him to take roasted meat of young bird with bread, lentil, vinegar in his diet and soup of meat mixed with clove and vinegar was permitted only on the day of taking medicine, and it was given before and after taking medicine, it reduced the thirst.

Then he was given the decoction of following purgative drugs:

1. *Haleela Zard* (*Terminalia chebula* Retz.),
2. *Fumaria officinalis* (*Shahtra* (*Fumitory*, *Fumaria officinalis* Linn),
3. *Afsanteen* (*Artemisia absinthium* Linn),
4. *Ghafis Gentiana olivierii* Griseb. (*Agrimonia eupatoria*),
5. *Hinduba* (*Chicorium intibus*),
6. *Sunbul* (*Nardostachys jatamansi*)
7. Rose with sugar

Pill made of Milk of *Shibram* and sugar was also given with *Ficus hispida* Linn and juice of *Reibas*.

Tila made of Gil Armani, vinegar, rose, Gaoras, barley powder, Billot, grape, Boraq, sulphur with vinegar was massaged over the abdomen then paste of Sandal wood was applied over the liver. Then he was purged by syrup of rose, *Mazryun* (*Clitoria ternatia*) and Milk of *Shibram*. He was given dry *Ficus hispida* Linn, almond and sugar and was advised to resist water intake, in case of intense thirst he was given water mixed with vinegar. Sometimes *Mazryun* (*Mezereon*, *Clitoria ternatia*) leaves mixed with *Ficus hispida* Linn emulsion was given before and after meal, however not even a single day passed that he was not evacuated by a purgative of one or another’. These are the quotation of Galen.

Diet: Quantity of food for ascetic patient should be less and refrained from wheat bread because it causes obstruction and viscosity, instead he should be given bread made of barley flour or wheat mixed with gram flour can be used. Olive oil is used in place of fat. Vinegar, chicken soup is included in the food because it clears the urine and corrects the

liver. Olives, carrot and garlic cooked together is also a better diet for such patients. Flesh of young bird and chicken, young fish, snake meat, deer meat are preferred.

Drugs harmful to *Tabali* type of ascites: Plant origin like Karafs, (*Apium graveolens* Linn.), *Salaq* (Chuqandar), and *Baqila Yahudia*, *Hinduba* (*Chicorium intibus*), *Shahtra* (*Fumitory*, *Fumaria officinalis* Linn), *Sarmaq* (*Bathua*), *Kurras*, *Suddab* (*Ruta graveolens*), leaf of *Kardia*, *Faudanj* (*Mentha arvensis* Linn.), garlic, sulphur and *Brassica nigra* Linn.

Useful drugs: Nuts like almond, pistachio and *Funduq*, dry dates given at breakfast. All fruits are prohibited except sweet *Punica granatum* Linn.. Alcohol is strictly prohibited.

Enema made of *Sakbeenaj* (*Ferula foetida* Regel. persica) and *Ersa* (*Iris ensata*) which removes the fluid is also employed.

Ingredients of *Shiyaf* (Suppository):

1. *Tukhm Utangan* (*Blepharis edulis*),
2. *Jamal gota* (*Croton tiglium*)
3. *Ghareequn* (*Agaricus campestris*),
4. Burada Tanba (Copper filings)

All these drugs are mixed with inner part of the bread and suppositories are made.

Diuretic drugs are also beneficial like Seeds of Utangan (*Blepharis edulis*), black *Kharbaq* (*Helleborus niger*, Linn.), *Panicum miliare*, *Kakanj* (*Physalis alkekengi*), *Sunbul Hindi* (*Nardostachys jatamansi*)

Another prescription:

Uod Balsan (*Balsamodendron opobalsamum* Linn), *Sunbul* (*Nardostachys jatamansi*), *Saleekha* (*Cinnamomum cassia*), *Kamun* (*Trachyspermum ammi*), *Aslussus*, *Izkhar* (*Rusa grass Andropogon schoenanthus* Linn), *Almond*, *Qust* (*Costus root*), *Carrot*, *Zaitun* (*Olive*), *Qitr Asaliun*, *Seeds of Karafs* (*Apium graveolens* Linn.), *Qasbuz Zareera* (*Swertia chirata*), *Filfil* (*Piper nigrum*), *Kakanj* (*Physalis alkekengi*), *Sisalius*, *Anjadan Rumi*, (*Asafoetida*),

All these drugs are taken in equal amount and made into powder. Dose: 6 gm. ³⁴

Section 25: Yarqan (Jaundice)

Jaundice (*Yarqan*) is the name of the state of the body in which the body colour changes in proportion to the black *Khilt* or yellow *Khilt*. It is accumulated in the skin without sepsis. The cause of yellow jaundice is usually a disorder in liver or gall bladder while cause of black jaundice is a disease in spleen or may be in liver also.

Yarqan Asfar (Yellow Jaundice):

It is yellow discoloration of eyes and skin. It is due to the accumulation of uninfected yellow bile towards skin. Excessive bile in the body can be due to increased production of bile in the liver due to any reason or obstruction in the passage of bile from the gall bladder at any point from liver to intestines. It is characterized by fever, nausea, vomiting, bilious vomiting, heaviness at the site of liver, excessive thirst, foetid breath, constipation. According to causes it is subdivided into different types: *Yaraqan Suddi* (Obstructive jaundice), *Yaraqan Warmi* (Hepatitis jaundice), *Yaraqan Ghalayani* (Haemolytic jaundice) *Yaraqan Sammi* (Epidemic jaundice), and *Yaraqan Buhrani* (Critical jaundice).

Yarqan Aswad: Blackish discoloration of the skin. It is due to the impaired function of spleen. It is characterized by blackish discolouration of urine and stool, tightening of the skin and abdomen, heaviness of the abdomen and sometimes discoloration of sweat.

Causes of Yarqan Asfar:

1. Specific: the cause of yellow jaundice is an excessive production of bile or its diminished evacuation. Excessive production of bile is caused by the disorder of producing organ or in the materials from which the bile is produced or due to any alien causes.
Liver is the normal site of bile production; it may become hot due to warming factors or swelling of the liver or swelling of bile duct or due to obstruction that hinders the flow of bile. When liver's heat increases it causes excessive production of bile.
2. Non specific causes: Excessive heats of whole body transform blood into bile. The matter that converts into bile is food due to its hot nature as milk does in hot stomach.
3. Causes from outside the body which increases the body temperature like stings of poisonous animals and insect bites or toxicity of some drugs. This type of jaundice occurs suddenly.
4. Jaundice due to excess of bile disperses because of its dominance on blood, the nature wants to expel it, and it is a jaundice of crisis. Jaundice increased due to blowing of northern wind in cold season, at the time of excessive production of bile in the liver and stoppage of usual sweating. It also occurs because of hot swelling, hot temperament, and obstruction of bile. The obstruction may be in liver substance or gall bladder or intestine or any other organ due to weak expulsive power or *Quwat Mumayyiza* (power of separation). It causes hindrance to the flow of yellow bile in its normal passage which is held back and becomes in excess in places where it is retained, this excess increases heat of the liver, as a result the liver produces more bile increasing the vicious cycle.

5. Jaundice due to disorder of gall bladder occurs because gall bladder is unable to absorb yellow bile from liver and so bile becomes excess in the liver. Sometimes gall bladder absorbs extra biles due to increased power of absorption and becomes too much congested that can not be absorbed further, it makes the passage of bile narrow resulting in diminished flow of bile and excess quantity of bile in liver.

Similarly obstruction in the passage from gall bladder to the intestine produces same result of diminished expulsion, retention and excess. All factors that cause obstruction to the flow of bile can cause jaundice. Sometimes excess of flesh polyp in these places can become the cause of obstruction and jaundice also.

Yarqan Aswad also caused by excessive heat of liver and burning of the blood into *Sauda* (Black bile), sometimes it occurs due to excessive bile or obstruction as described in the case of *Yarqan Asfar* and sometimes both are found together in a patient due to admixture of burnt blood.

If jaundice is not treated properly the result is always dangerous leading to death. Worst type of hepatic jaundice is the one caused by *Warm* (swelling). Hippocrates described that jaundice along with remarkable hardness of liver is extremely dangerous state.

Symptoms of Jaundice:

Change in urine colour is an important sign in all types of jaundice, it is indicative that liver is expelling the excessive quantity of humor from the blood.

Jaundice due to *Sue Mizaj* of liver, signs:

1. Specific symptoms like in acute swelling of the liver.
2. The colour of the stool will be bilious. Whiteness of stool or feeling of heaviness which is the sign of obstructive jaundice will not be found.
3. Loss of appetite,
4. Increased thirst,
5. urine is deep reddish colour and the body begins to dry up

Jaundice caused by toxicity of bilious humor and swelling of the gall bladder, signs:

1. Yellow coloration of the body,
2. Blackness of the face,
3. White tongue and
4. Severe constipation
5. Urine will be white in the beginning due to retention of bile inside the body then urine colour becomes highly pale then black and thicker with strong smell in the last.

Jaundice caused by *Sue Mizaj Harr* (Abnormal hot nature) in whole body, symptoms:

Itching, loss of appetite, body surface is hot to touch, stool is loose and sometimes it is colored. Jaundice caused by acute or hard swelling: the symptoms are same as described in enlargement of liver.

Jaundice caused by obstruction, signs:

Whiteness or light yellow of the stool, severe yellow colour of urine, there is a feeling of heaviness on the right side of the abdomen and feeling of pain and flatus at the time of taking meal, itching in whole body

Yarqan Marari (jaundice due to swelling of gall bladder):

At first the stool is white followed by the appearance of jaundice.

Obstructive jaundice: Obstruction in the duct between gall bladder and intestine, signs:

Severe constipation, bitter taste of mouth, and severe thirst along with jaundice

Obstructive jaundice caused by coldness or contraction (spasm) is diagnosed by previous condition of the body, if it is caused by growth of a flesh or thick humor, jaundice and its symptoms will persist for a longer time. *Mufattihat* (Deobstruent drugs) are beneficial in this case.

Jaundice of crisis (*Buhran*) arises due to acute critical diseases. Symptoms of *Buhran*:

Nausea, vomiting of bile, loss of appetite, severe thirst, dryness of nature, Pulse in yellow jaundice will be small due to weakness of power and sweat is also yellow.

Treatment of Yarqan Asfar (Yellow Jaundice)

Treatment is done in two directions:

- 1) Removal of jaundice itself or yellow coloration from skin, eye etc. is done by the cleansing drugs and by the drugs that expel the matter of jaundice.
- 2) To remove the root cause of the jaundice, this includes Correction of the nature and strengthening of the power, cure of the swelling, removal of the obstruction and evacuation by venesection, purging or emesis

Evacuation by emesis is beneficial in each types of jaundice.

If there is a toxic matter it should be expelled first, congestion of blood should be treated by venesection,

Congestion of bile should be evacuated by purgative drugs like Haleela, *Fumaria officinalis* Saqmunia (*Convulvulus scammonia*), and whey water.

Another Prescription: Goat milk, Qurtum (*Carthamus tinctorius*), Honey, Sugar, Salt

Prescription for the acute inflammation of liver and its vessels and fever:

1. Extract of radish leaf,
2. Khiareshanbar (*Casia fistula*)
3. Bazr Qatuna (*Gossypium herbaceum*)
4. *Aloe barbadensis* (Sibr Saqutri)
5. Zafran (*Crocus sativus*)

Foods like water of barley and other vegetable is given. When maturation signs appear, drugs like Saqmunia (*Convulvulus scammonia*), *Aloe barbadensis* (Sibr Saqutri) can be prescribed as per situation or decoction of Kasus (*Cuscuta reflexa* Roxb.) and Kasni to reduce the effect of purgative.

As long as acute swelling persists, never hasten to treat jaundice itself. Absence of fever and presence of strong power means there is no swelling.

In case of inflammation of gall bladder, the patient should be given extract of Afsanteen (*Artemisia absinthium* Linn) and other fruits like *Punica granatum* Linn.. Food of fermented bread and leaves of *Kasni* are also beneficial. Alcohol is prohibited in this condition.

Treatment of Jaundice caused by heat:

1. Night awakening, angry, excessive movements and bath should be avoided
2. If there is Heat all over the body, liver, gall bladder and vessels should be cooled by the decoction of cold and wet drugs.
3. Cold pastes like Camphor and Sandal are also applied on liver and gall bladder

In case of liver weakness treatment mentioned in the Section of liver weakness should be adopted.

In case of obstruction in the concavity of the liver, purgatives are used while diuretic are given if it is in the convexity of the liver.

Drugs for obstruction: Extract of radish leaf and *Baqlatul Humaqa* (*Khirfa*, *Portulaca oleracea*, *Rumes vesicarius*) mixed with pea is given.

In case of drying condition, laxatives like mucilage, *Sapistan* (*Cordia latifolia*), and almond oil are used.

If the cause is acute swelling then diuretics like Aneesun (*Pimpinella anisum* Linn), Badian (*Foeniculum vulgare*) is used. If there is hard swelling it is difficult to remove the root cause, therefore treatment should be focused on jaundice itself by use of simple drugs.

Best drugs that dissolve the obstructions are *Unsil* (*Scilla indica*) and *Asarun* (*Asarun europium*).

Pill made of following drugs is effective in this case:

Bitter almond, Afsanteen (*Artemisia absinthium* Linn), Asarun (*Asarun europium*), Aneesun (*Pimpinella anisum* Linn), Ghareequn (*Agaricus campestris*)

Another formula:

Habb al- Sanobar (*Pinus gerardiana*), Zabeeb (*Vitis vinifera* Linn.), Sulphur, Aftemun (*Cuscuta reflexa* Roxb.), Karafs, (*Apium graveolens* Linn.), Black gram, White Kundur (*Boswellia serrata* Roxb, Olibanum), All these drugs are well ground and strained and given with *Arq Badian* (*Foeniculum vulgare*).³⁵

Jaundice caused by the obstruction in the duct of gall bladder is difficult to treat but use of enema and purgatives like Aftemun (*Cuscuta reflexa* Roxb.) and Bisfaj Fustuqi (*Polypodium vulgare* Linn) are most appropriate. Dawa al Kurkum, Tiryaq and Dawa al Lak Maghsool (*Cateria lacca*) are beneficial in chronic obstructive jaundice. If there is fever then Root of Khas with honey, Arq Kasus (*Cuscuta reflexa* Roxb.), Kasni and Khiarshanbar (*Casia fistula*) with almond oil is better.

In all conditions of jaundice efforts should be made to treat the disease itself and its dissolution by any methods which is suitable like dissolution of the obstruction, use of cleansing agents, snuff and *Hammam*, use of drugs that expel the yellow bile humors by purgation or diuresis. Skin function should also be stimulated to induce diaphoresis by exercise or drugs.

It is also reported that fixing eyes on the yellow object by the patient of jaundice stimulates the nature to expel the bilious humor from the body. This is the fact not denied by Ibn Sina as it may be beneficial somehow.

Drinking juice of radish, Halyun and *Booriq* (Boran) when patient is taking *Aabzan* (Hot tub bath) from the decoction of *Persiaoshan* (*Adiantum capillus-veneris*) facilitates excretion of yellow bile from the skin.

Other useful drugs:

Sulphur, half fried egg, rind of the *Punica granatum* Linn., *Zarneekh* (Orpiment), *Trigonella foenum-graecum* Linn. (*Hulba*), Honey, *Aneesun* (*Pimpinella anisum* Linn), *Mentha arvensis* Linn., *Habb Balsan* (*Balsamodendron opobalsamum* Linn), *Kundur* (*Boswellia serrata* Roxb, Olibanum), *Razianaj*, *Badian* (*Foeniculum vulgare*), *Darcheeni* (*Cinnamomum zeylanicum* Blunc.), *Rubia cordifolia* (Majeth,), *Qarnul Ayyil* (Stag Horn, Cervus elaphus), *Nankhwah* (Ajwain Desi, Kamun, *Trachyspermum ammi*), *Mawezaj*, *Bussud*, *Rewand Chini* (*Rheum officianale* Baillon.), *Ghareequn* (*Agaricus campestris*),

Afsanteen (*Artemisia absinthium* Linn), Juntiana (*Gentiana lutea* Linn.), Jauzus Sarv, Qust (Costus root), Zaravind, Saleekha (*Cinnamomum cassia*)

Purgative Pill:

Hanzal (*Citrullus colocynthis* Shrad.), *Aloe barbadensis* (Sibr Saqutri), Saqmunia (*Convulvulus scammonia*), Ghareequn (*Agaricus campestris*), these drugs are made into pills and given with juice of seeds.³⁶

Snuff with water extract of Qithaul Himar (*Luffa echinata*), radish, *Hayy al Alam*, *Afsanteen* (*Artemisia absinthium* Linn), Vinegar, juice of coriander, almond oil is beneficial.

Ghasulat (Lotion) is made of following drugs:

Persiaoshan (*Adiantum capillus-veneris*), *Marzanjosh* (*Origanum vulgare*), Ju'da, *Matricaria chamomilla* Linn Chamomile (Babuna), Uqhuwan (Daisy), Hask, Common dill (*Anethum graveolens* Shibbat), All these drugs are boiled in the water and decoction is mixed with *Humaz Al Atraj* which has severe cleansing effect.

The paste is also made of these drugs and mixed with the oil of Aqhowan, *Matricaria chamomilla* Linn Chamomile (Babuna), Common dill (*Anethum graveolens* Shibbat), Sosan and applied as a poultice over the liver.

Yarqan Buhrani. When main cause is reduced, cure for jaundice itself should be done by *Ghasulat* and diuretics. Sometimes it needs no purgative and only *Hamam* is sufficient. If pale color is reduced in urine and stool, it means that matter is concentrated and it is treated by *Ghasulat* and glutenious drugs.³⁷

Toxic jaundice: It should be neutralized by *Tiryag* and *Mathridites*, then juice of apple, *Punica granatum* Linn., Kasni, Baqlatul Humaqa (*Khirfa*, *Portulaca oleracea*, *Rumes vesicarius*), Zarishk (*Berberis aristata*) and mucilage of *Aspghol* (*Plantago ovata*) along with all cold drugs is given. Milk with almond oil is also beneficial in poisonous case.

Diet: All precautions that have been given in liver diseases should be adopted in the jaundice also. However, diet given in jaundice should be light, easily digestible and causing the dissolution of the obstruction.³⁸

Section 26: Liver disorders as per Modern description and its cure by Nature

The liver works as a huge laboratory within the human body and is responsible for filtering the returning blood that is packed with nutrients and other substances absorbed through the large intestine.

The liver carries out complex, biochemical processes that eliminate toxins, synthesize proteins and vitamins and make it easier to exploit other substances.

In addition the liver produces the bile that aids in the digestion of fats and eliminates certain substances.

This organ has considerable functional capacity, as 75%-90% of the liver must be damaged before values indicating a disorder will be noticed in the blood.

The liver is so vital for life that, once it has been irreparably damaged, the patient's only hope for survival is to receive a healthy liver transplant.

A diet to prevent and cure liver disorders

A suitable diet for liver disorders should be based on the following:

Fruit and fruit juice, as these contain many vitamins, minerals and enzymes, their sugar content can be easily assimilated and because of they refresh, act as diuretics and stimulate the appetite. Fruit contains plenty of cellulose and very little salt.

There was a time when cures based on fruit, especially fresh fruit, were not recommended for patients with liver complaints. However, when the dietary value of fresh fruit (especially bananas, strawberries, cherries and grapes) was discovered then it became a permanent fixture in the diet for people suffering from chronic liver complaints. Nowadays, the use of fruit through fruit-based cures is a wide-spread practice, grape and grape-juice cures are the most recognized and most commonly applied cures in spas and other health centers.

Vegetables should also be included, especially root vegetables (specifically carrots and beetroot, as well as squash and tomatoes, and in certain cases radishes. Artichokes should also be eaten raw boiled with potatoes or baked in the oven. Begin first with juice and then introduce the vegetables, which initially should be lightly fried and then chopped up. Salads will be left for later on, when the digestive capacity has improved.

Apart from causing flatulence, pulses (beans, Lentils, peas, chickpeas, etc.) contain substances are cannot be tolerated by a diseased liver, and for this reason they are to be totally excluded from the diet.

Potatoes, especially creamed potatoes, are an essential part of the diet, and are tolerated very well on their own or when accompanied by milk and fruit.

Dairy products (milk, Yogurt, Curd cheese and green cheese) are very useful as they have a high protein and vitamin content, and have a low but necessary amount of fat.

Soy milk and tofu are good alternatives to dairy products.

Soy lecithin has an effect on the nerves and the liver. The choline released by lecithin is an

important hepatic active ingredient, which impedes fatty degeneration of the liver and helps prevent disorders that affect its detoxification functions. Nowadays, we are well aware of the dietary value of skimmed milk for all types of jaundice and liver complaints. In addition, curd cheese is rich in proteins and is tolerated well.

Cereals can also be beneficial as they have high carbohydrate content and both cereal germ and the bran contain vitamin B complex. What's more, they are especially beneficial for the liver as they contain numerous active ingredients and trace elements. Vitamin B group factors intervene in a specific way on the metabolism of both carbohydrates and proteins, and strengthen the enzymatic functions of the liver as well as those related to detoxification. In the first few days of acute hepatitis it is a good idea to follow a diet that includes only rice, or rice with bananas and carrots. During later recovery, porridge made with rolled oats, wheat or other cereals and milk is recommended.

Honey is an essential component of the diet, as it contains a high level of sugars, especially fructose a sugar has proven to cure more effectively than glucose. Quite often a damaged liver can no longer synthesize glycogen from glucose, in which case the body can get the glycogen it needs from fructose, as chain of completely different chemical reactions are needed in both cases. In liver metabolism, 40% fructose is transformed into glycogen.

Boiled eggs or an omelet can be eaten occasionally. Remove all excess oil from them using clean kitchen paper, so that they can be tolerated more easily. It is a good idea to accompany them with fruit, such as apple or blueberry compote.

Fats: if a patient has lost a good deal of weight and has to recover some, complement the diet with a maximum of 30 gm of cream, vegetable, margarine, or vegetable oils extracted using cold processes (olive, sunflower, soy, etc). All products containing animal fats, such as bacon and cold meat, are totally forbidden.

Drinks: Apart from milk and fruit juice, you may drink herbal tea made with

Brier hip (*Rosa canina* L)

German camomile (*Matriarca chamomilla* L)

Pepper, *Mentha arvensis* Linn (*Mentha piperita* L)

Celandine (*Chelidonium majus* L)

All stimulants are to be strictly avoided especially alcohol and tobacco. Drinks containing stimulant (coffee, mate) are contraindicated for all hepatic disease.³⁹

Section 27: Hepatitis

Hepatitis is an inflammation of the liver and it is one of the most common types of

infectious disease. The majority of hepatitis are viral in nature, although toxic hepatitis, caused by alcohol, is the second most prevalent kind.

Hepatitis produced by other toxic agents (drugs, industrial toxins, poisonous toadstools), bacteria, metabolic alterations (such as an excess of copper) autoimmune diseases and congenital alterations, are much less common.

Evolution

80% of acute hepatitis cases can be cured within 6-8 weeks, and hepatic tissue will completely regenerate. A blood test provides reliable data regarding cure, but the only way to be one hundred percent certain is by analyzing hepatic tissue extracted during a biopsy.

Some types of hepatitis cannot be cured and will become chronic (hepatitis B, C, D and G), and sufferers are permanently contagious carriers of the disease. Hepatitis is more likely to become persistent and is more difficult to cure in the case of immuno-depression (low defenses).

Chronic hepatitis may degenerate into cirrhosis and, in this case, the risk of liver cancer is greatly increased. Alcohol is one of the liver's worst enemies.

Dietary treatment for hepatitis

- Eat sufficient protein
- Eat plenty of carbohydrates, vitamins, enzymes and food rich in vegetable fiber.
- Keep your consumption of fats and common salt to minimum.
- Reduce your liquid intake.

Follow the same instruction in the case of chronic hepatitis, but increase your consumption of protein, especially sulfur amino acids, such as methionine and cystine, to help regenerate the liver (

Physical treatment

- Bed rest, which may in some case last for several months.
- Compresses on the lower abdomen.
- Washes using vinegar diluted in water to relieve the itching jaundice produces on the skin.

Phytotherapy and medication

- Boil milk thistle (*Silybum marianum* (L.)~ Gaertn = *Cardus marianus* L.) 40g/ liter and drink a glass of the decoction half an hour before main meals. There are also pharmaceutical preparations based on milk thistle that may also be useful.
- Herbal tea made with brier hip (*Rosa canina* L.~ German *Matricaria chamomilla* Linn

Chamomile, pepper *Mentha arvensis* Linn. (*Menthe piperita* L.), and celandine (*Chelidonium majus* L.).

- Artichoke extracts.
- Interferon may be administered in cases of chronic hepatitis B and C, but this is only to be taken with a medical prescription.

What to avoid with hepatitis

With all types of hepatitis the following must be excluded from the diet:

Animal fat, cold meat and any products made with pork, smoked, salted and fried food, hot and spicy food, tobacco, alcohol, coffee and mate.

Section 28: Types of Hepatitis

Hepatitis A, Transmission

Hepatitis A is transmitted enterally. The virus is eliminated through the feces, which enter the digestive system of another person through contaminated hands, water or food and infects them.

Evolution and population at risk

Hepatitis A is an acute type that does not become chronic.

It is most common in developing countries, in travelers, and in close communities, such as playschools, homes, barracks, etc.

Prevention

- Be extremely careful of hygiene, if in contact with an infected person.
- Always wash your hands before eating and after going to the toilet.
- Be careful of water, as the possibilities of contamination by fecal waste may make it dangerous to drink and even bathe in.
- Shellfish may be contaminated by the hepatitis A virus, and therefore is especially risky during an outbreak of this epidemic.
- Travelers to endemic countries should take special precautions.

Immunization

- Passive: After recent contact with an infected person, when there is not enough time to receive active immunization through a vaccine, immunoglobulin will be injected, immunoglobulin can also be administered up to two weeks after contact with an infected person or after a visit to an endemic country.

- Active: The vaccine is extremely effective and is indicated for travelers to endemic areas, food handlers, sewer workers, employees at child care centers and homes, children in high-risk communities, patients suffering from chronic liver disease, etc.

This vaccine is contraindicated during pregnancy.

Once you have had the disease you are immunized for life. So, it is a good idea to have a blood test before the vaccination to ensure you have not already had the disease, in which case vaccination is unnecessary.⁴⁰

Hepatitis B

Transmission

Hepatitis B is transmitted parenterally and through the mucous membranes. The disease can be caught through serum, semen and saliva; although in 37% of cases the means of communication is never discovered.

Evolution

This type of hepatitis is acute but may become chronic and degenerate into cirrhosis or hepatocellular carcinoma. There are approximately 300 million chronic infected carriers of the virus worldwide.

Population at risk

Health care workers and people employed to clean health care centers, hemodialysis patients, people in close contact with carriers, hospital patients, fire fighters, police, sewer maintenance workers, garbage collectors, people traveling to and living in areas where the disease is endemic, people who are promiscuous in their sexual relationships and people who take drugs parenterally, people who have been treated with non sterile instruments (at the dentist's, in tattoo parlors, or when receiving acupuncture) and children (through small cuts, bites and scratches).

Infected women may pass the disease on to the fetus during pregnancy.

Prevention

- Avoid coming into contact with any body fluids, and take extreme precautions if this cannot be avoided, regardless of whether these may be contaminated or not.
- Do not share items of personal hygiene such as toothbrushes, razors or manicure accessories with others, regardless of whether they have been recently used or not, as the hepatitis B virus can survive for up to seven days.
- Always use sterile instruments and disposable needles.
- Detection of the hepatitis B antigen in blood banks.

Passive immunization

- Specific immunoglobulin after contact or after accidentally pricking oneself with a needle. In this case, one dose will be administered during the first seven days, and the second dose one month later.
- A newborn baby of an infected mother will be administered the immunoglobulin within the first twelve hours of life.

Active immunization

The vaccine, which can be administered to pregnant women, is effective in 95% of cases.

Hepatitis C

Transmission

Hepatitis C is transmitted parenterally and constitutes between 80%-90% of post-transfusional cases. It can also be contracted through organ transplants and contaminated needles. It is rarely passed on through sexual relations or during delivery. In 49% of cases the means of communication is never discovered, although it is estimated that over 500 million people are infected worldwide.

Evolution

Hepatitis C is the most frequent cause of chronic hepatitis, and may develop into cirrhosis or cancer of the liver.

Population at risk

The population at risk is the same as in the case of hepatitis B, with the exception of sexual and mother-to-child contagion.

Prevention: The same criteria as for hepatitis B are applied. ⁴¹

Immunization

- Passive: Immunoglobulin has not been proved effective.
- Active; no vaccine exists as yet.

Hepatitis D or Delta

- Transmission: as in hepatitis B.
- Evolution: as in hepatitis B.
- Population at risk: this disease only affects people infected with hepatitis B (5%) above all drug addicts who share needles.
- Prevention: the same criteria as for hepatitis B are applied.
- Immunization: none exists.

Hepatitis E

- Transmission: the same as for hepatitis A.
- Evolution: Between 0.5%-4% of young adults and pregnant women may die.
- Population at risk: the same as for hepatitis A.
- Prevention: Immunoglobulin cannot be used as effectively for passive immunization as with Hepatitis A.
- Immunization: No vaccine for active immunization exists.

Hepatitis G

- Transmission: Parenteral.
- Evolution: Acute hepatitis that may become chronic.
- Population at risk: The same as for hepatitis B.
- Prevention: The same as for hepatitis B.
- Immunization: None exists.

Model diet for chronic hepatitis

Below is a suggested model diet that can also be followed by those suffering from cirrhosis.

Breakfast

- Muesli with milk and honey
- Sweet dried fruit, raisins and prunes
- One piece of ripe fruit

Lunch

- A salad dressed with olive oil and lemon
- Boiled potatoes and vegetables
- Yogurt, curd or green cheese, or tofu

Afternoon snack

- Natural fruit or vegetable juice

Supper

- Creamed rice (made with cow's milk or vegetable milk), or porridge with almond paste
- Two or three pieces of fruit in this diet, as with all the other models, the amount of food must be adapted to the individual's energy needs. Needless to say in the patient is suffering from other disorders apart from hepatitis, or if there are any special circumstances, the doctor will establish the appropriate dietary criteria.

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