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CONCEPT OF QARHA (ULCER) IN ALLOPATHY & UNANI SYSTEM OF MEDICINE - A REVIEW ARTICLE

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ABSTRACT

Non-healing ulcers are becoming a major public health problem. The high prevalence of ulcer directly affects patients' quality of life because it produces psychological (anxiety, depression), social and physical (amputation) handicap. Most ulcers become unsightly and they hardly if ever, yield to conventional treatment. Healing of an amputated part may pose a problem, hence amputation cannot be recommended without extensive pre-operative investigations. Prevalence is high among the poor, for whom expenses of surgery are not affordable. Few surgeons try skin graft but unfavourable local condition of the ulcer leads to rejection and all efforts prove futile. Keeping all these factors in mind, we have tested a Unani formulation for its ulcer healing properties; early results were surprising and in some cases unbelievable. The pathogenesis of ulcers is complex, and different factors play major roles in different stages. The refractory nature of ulcer is reflected in that even after healing there is still a high recurrence rate and amputation rate, which means that management and nursing plans need to be considered carefully. Focusing on the relationship between the risk factors and DFU progression may facilitate prevention and timely management; in the last part, we emphasize the importance of preventive education, characterize several of the most frequently used management approaches, including glycemic control, exercise, offloading, and infection control, and call for taking into account and weighing the quality of life during the formulation of treatment plans.

KEYWORDS: Ulcer, Unani or Herbal Drugs, Diagnosis and treatment, Prevention and management.

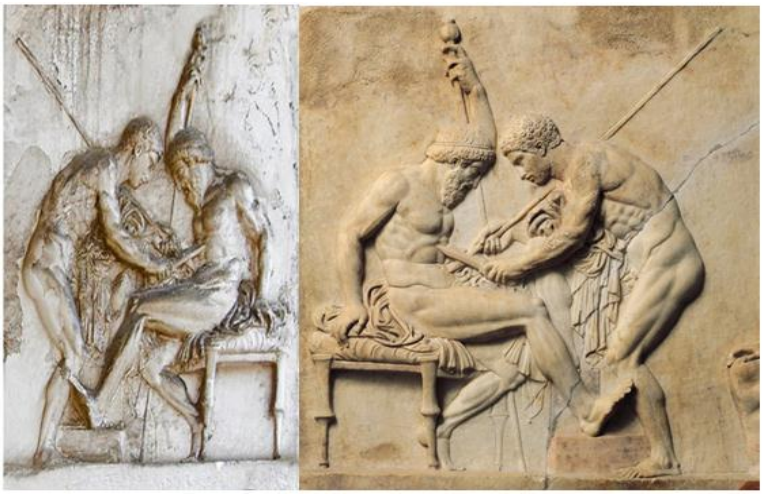
I. INTRODUCTION, HISTORY AND BACKGROUND OF ULCER (QARHA)

The incidence of chronic ulcer is as old as history. Hippocrates, who is the father of medicine himself, had a leg ulcer. It was the era when anaesthesia, anatomy and physiology were never heard of. He treated multiple varicose veins by puncturing them at different levels to prevent non-healing ulcers and about 400 BC he wrote 'In case of an ulcer it is not expedient to stand, especially if the ulcer be situated on the leg.' Avicenna (982–1027 AD) gave a good account of diabetes and was the first one to describe diabetic gangrene. From the 10–18th centuries, various physicians including Hali Abbas, Avicenna, Falopio and Pare attributed ulceration of the leg to accumulation of black bile or bad humours and believed that ulceration of the leg served a useful purpose in getting rid of these live substances.

The Greeks were very well aware of the importance of Skin Ulcer closure and were the first to differentiate between acute and chronic Skin Ulcer, calling them 'fresh' and 'non‐healing', respectively. Hippocrates of ancient Greece (460–70 BCE) often used wine or vinegar for washing wounds. According to Sarabahi and Tiwari, Hippocrates preferred to maintain the Skin Ulcer dry for its quick healing over the application of greasy ointments, but Bhattacharya states that he used to apply dressing over the Skin Ulcer with fig leaves having wounds been washed with wine. Unique aspect of Greek medicine is to explain the ritual practices with the scientific concept. For example, Greeks also used to rub tip of a lance to the wound floor so that some of the copper powder would be sprinkled over it. Later, it has been suggested that copper along with vinegar produces copper sulphate which exhibits antibacterial properties. Similarly, marble carvings in the temple of Asklepios associate Skin Ulcer healing with having been in contact

with non‑oisonous snake. Later on, Angeletti *et al*. suggested that the healing could have been occurred by salivary growth factors of the serpent.

According to George Eber's papyrus, the Skin Ulcer were examined properly by palpating the surrounding structures to rule out any discharge from it. Balsams/ointments were used for wounds and ulcers. For this purpose, they used plant, mineral and animal origin drugs such as Anjeer (*Ficus carica*), Aelwa (Aleo Barbadensis), Loban (*Styrax benzoin*), Lehsun (*Allium sativum*), Alum (Potassium Alum), salts, animal fats and blood. The Brugsch Papyrus, circa 1200 BC, stated that the Egyptians believed that making sure a person's Skin Ulcer stayed closed would help spirit not be invaded by evil spirits. As described above, Archagathos was the first Greek/ Unani physician (Dweller of Sparta in Greece/ Unani) who moved to Rome from Greece to provide his services to the Romans, as roman usually engaged in wars. He was an expert in surgery and treatment of Skin Ulcer & Wound. He usually used to go with roman on wars to provide his Skin Ulcer & wound care services to the injured if needed. In other words, one surgeon always remained available with the roman military on the mission. Romans used silver nitrate therapeutically for wound care. These are the vital examples that reveal the evidence of the development of military medicine in Rome.



This marble relief from Herculaneum shows Achilles scraping rust from his spear onto the wound of Telephus.

Fig. 01: Wound and Skin Ulcer surgery in Ancient Greek.

Abul Qasim Zohrawi /Albucasis (936–1036 AD) in his most famous book 'Al‑Tasreef /Vede‑Mecum' in volume number 30 has described detailed literature about wounds, ulcers and injuries and their treatment. Ali Ibn Isa Kahhal /Jesu Haly (1039 AD) in his famous book 'azkarat‑l‑ahhalein' has mentioned the procedures of eye surgeries and according to Paulus Aegineta, eye wounds and its treatment. Ibn Zuhr/ Avenzoar (1091–162 AD), who had been a famous surgeon of the time, described the wound and its treatment in his famous and most accepted book 'itab‑t‑aiseer'. He was an expert in the operations of renal stones, fistula, tracheal obstruction and cataract.

Isma'l Jurjani (12th century AD)/In Western; Gorgani, in his most accepted book 'akheera Khuarzam Shahi' in jild number seven, has given the detailed and fine descriptions of the wound and Skin Ulcer treatment. He advocated the application of plaster cast if bleeding is huge from the wound & Skin Ulcer. Ibn Baytar (1197 AD) in his reputed book 'itab‑ljaame‑l‑ufradat' has described many planter, mineral and animal origin drugs, and also among them, the drugs, used for the treatment of wounds. Najeeb‑d‑in Samarqandi (13th century AD), in his famous book 'itabul‑sbaab‑a‑lamaat' jild number 3, has mentioned a fine description of the surgery. Ibn Khateeb (1313 AD) has described crude drugs widely used in the treatment of ulcers/wounds in his famous book 'itab‑l‑dvia'.

In developed countries, the most common chronic wounds are leg ulcers. Chronic ulcers are the breaches that fail to heal. In general, they have a fibrotic margin and a bed of granulation tissue that may include areas of slough (necrotic tissue). Ulcers are particularly common in the bottom third of the lower limb and foot.

Venous diseases affect approximately 5% of the world population. It was once thought to be a disease affecting only the elderly. The incidence increases from middle age onward. About 70% of all leg ulcers result solely from venous diseases, and an additional 20% of patients have mixed arterial and venous diseases. The other 10% of leg ulcers result from a variety of causes, including neuropathy, prolonged pressure, infections, neoplasm and inflammation. The high prevalence of venous diseases directly affects patients' quality of life. Family history of venous diseases, obesity, smoking, high cost of treatment, work timings, prolonged standing and hypertension are among the factors that contribute strong socio-economically devastating effects to a country's health care system.

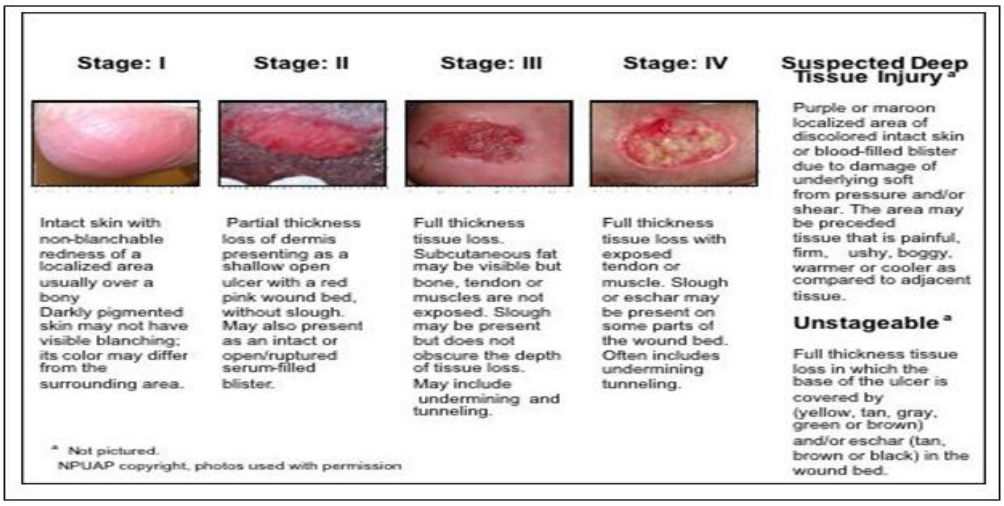


Fig. 02: Stages of Ulcer in Human.

Franks *et al*. (1995) reported that risk factors such as age, social isolation, size and duration of ulcer, oedema, pain, recurrence and lack of continuity in the treatment cause delay in wound healing, and it has also been reported that depression can delay the healing process.[5]

Some researchers also accept that some indirect factors also delay the healing process in depressed individuals, like self negligence, negligence by family member, disturbed sleep and poor appetite (elderly patients). Uncleanliness and personal unhygienic life style may also be contributory factors for delayed wound healing.

In the Unani system of medicine, chronic ulcers are known as Quroohe Khabeesa. According to Unani philosopher Rabban Tabri, every organ of the body has its own *mizaj* and organs perform specific function up to the maximum extent until the *mizaj* is in normal limit. It is also a general principle of Unani system of medicine that whenever *hararat* and *ratubat* increase beyond the normal limit, they precipitate *ufoonat* (putrefaction), that is, it provides favourable environment for *ufoonat*. Hence, all measures should be taken to restore the *mizaj*.

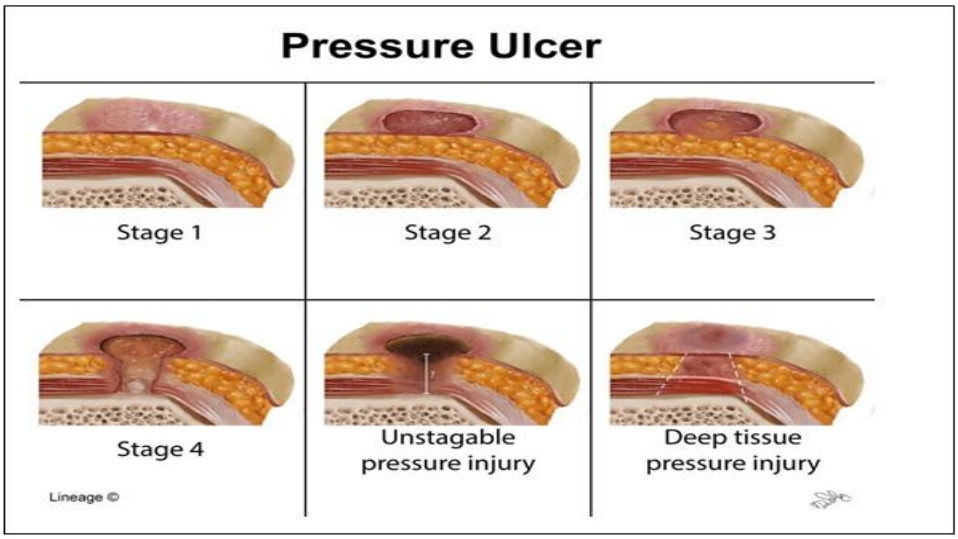


Fig. 03: Pressure of ulcer on human skin.

Every organ of the body has its own *quwate ghazia*. After the completion of *hazm* (digestion), two types of *fuzlat* (morbid matter) are produced. First are *raqeeq* (thin) and the other are *ghaleez* (thick). These morbid matters interfere with healing. Hence *tabiyat* should be assisted with *mujaffif advia*, which reduce the discharge and clean the morbid necrotic tissue. In the present pilot study, efficacy of an ointment (Unani) chosen from classical Unani text, in healing of chronic leg ulcer was tested on patients visiting Hospital.

II. Correlation between Ulcer healing measures used in History and Today

Myrrh and Frankincense first used in Mesopotamia and then Egypt are still in use in several ways. Frankincense and myrrh are both aromatic resins extracted from trees. Essential oils and aromatherapy have given frankincense a rebirth in the West.[In a study conducted by Kamil and

Al‑Ghaban *et al*., it was found that the application of combined myrrh oil and sage oil over the experimental skin Ulcer on rabbits resulted in accelerated skin Ulce healing within a short period. In another study conducted by Pengzong *et al*. in 2019, it was found that extracts of *B. serrata* (Frankincense) exert its skin Ulcer healing properties through many pathways such as inhibition of oxido‑inflammatory markers (tumor necrosis factor alpha, oxido‑nitrosative stress, nuclear factor‑kappa‑light‑chain‑enhancer of activated B cells and inter leukins), increased collagen synthesis (collagen‑1 and hydroxy proline) and angiogenesis (Ang‑1/Tie2), promoting growth factors (vascular endothelial growth factor and transforming growth factor‑beta 1) and inhibition of apoptosis (Bcl‑2‑associated X protein) to speed up skin Ulce healing in experimental delayed diabetic foot ulcer. National Institute of Unani Medicine, India, has conducted several kinds of research on skin Ulcer healing properties of frankincense (Kundur‑*B. serrata*) and myrrh (Mur‑*C. myrrh*) based formulations. Apart from skin Ulcer care measure, frankincense and myrrh, today, are used in many types of mouthwash, gargles and toothpaste.

Turmeric has been in use for 1000 of years in ancient India. Recently, it has been found out that Curcumin (Diferuloyl methane), the main constituent of turmeric, accelerates skin Ulcer healing by granulation tissue formation, collagen deposition and skin Ulcer contraction. Various pharmaceutical companies in India, Bangladesh and Pakistan are manufacturing curcumin‑based compounds such as face creams, sunscreen and also gels for wound healing. Skin Ulcer embalming and bandaging concept that had been given by Egyptians is still a part of the routine wound dressing in almost every corner globally. Galen (Jalinoos) documented various methods of arresting haemorrhage from wounds, such as applying pressure, ligating bleeding vessels and cauterisation of the raw surface of the skin Ulcer. In the 21st century, practicing the methods of haemorrhage management such as pressure application, ligation of bleeding vessels and cauterisation is widely accepted.

Galen (Jalinoos) coined the idea of treating the skin Ulcer in a moist wound‑healing environment. Recent uses of hydrogels, foams, alginates, honey and various solutions would seem similar, as they all create a good moist healing environment to wounds. Egyptians were most probably the first people to apply honey to the wounds. The medicinal properties of honey have also been described in the Bible, the Quran and the Torah. Honey is still a part of many advanced skin Ulcer dressings due to its anti‑microbial, anti‑oxidant, neo‑granulation formation and wound contracting activities owing to the presence of glucose, fructose, sucrose, amino acids, minerals, anti‑oxidants, hydrogen peroxide, methylgyoxal, bee defensin‑1 and gluconic acids. The idea of secondary suturing was first given by Celsus (7 BC–37 AD). Secondary suturing is still practiced across the world and is the key to close various wounds after they have been debrided to the fresh one. The silver‑based compound was first used by Graeco‑Romans for wound care; it is still in wide practice in burn wound management. However, there is a lack of data supporting its efficacy in wound healing. Chinese practitioners used the extract and tincture of tea leaves for wound dressing, whereas recent use of tannic acid would seem similar, as tea leaves contain tannin. Honey was used in Egyptian and Graeco‑Roman medicine for wound healing and other health‑related problems, recent uses of flavonoids, phenolic compounds, and hydrogen peroxide would seem similar, as the honey is still a part of many advanced skin Ulcer care dressings and contains flavonoids, phenolic compounds and produces hydrogen peroxide that increases its anti‑microbial activity. Sesame oil first used in Mesopotamian culture is still a part of some important therapeutic applications in Iran, for example, to prevent the development of amiodarone‑induced or chemotherapy‑induced phlebitis and skin ulcers.

III. Definition of foot and toe Ulcers. (Qarha)

An ulcer is an open wound or sore that will not heal or keeps returning. When you have ulcers on your feet and toes, it can be related to diabetes specifically, a complication called neuropathy that causes you to lose feeling in your feet. A scrape, cut or puncture in your skin can turn into an ulcer, but you might not know it's there if you have neuropathy.

Ulcers can lead to infections. Sometimes, the infection won't go away and you may need to have part of your foot or toe surgically removed (amputated). About 15% of people with diabetes will get a foot or toe ulcer. Around 14% to 24% of people with diabetes in the U.S. need an amputation after they get an ulcer.

Foot and toe ulcers can happen to many people but might be more common in Black, Native American and Hispanic people. If you have an eye, kidney or heart disease related to diabetes, you're also at a higher risk. About 15% of people with diabetes will get an ulcer, typically on the bottom of their foot. Some of those people will be hospitalized because of complications. You're also at a higher risk of getting foot and toe ulcers if you have any of the following conditions:

- Blood circulation issues.
- Heart disease.
- Obesity.
- A foot condition like a bunion or hammertoe.
- Kidney disease.
- Lifestyle behaviors like using tobacco and alcohol can also increase your risk of developing ulcers on your feet or toes.

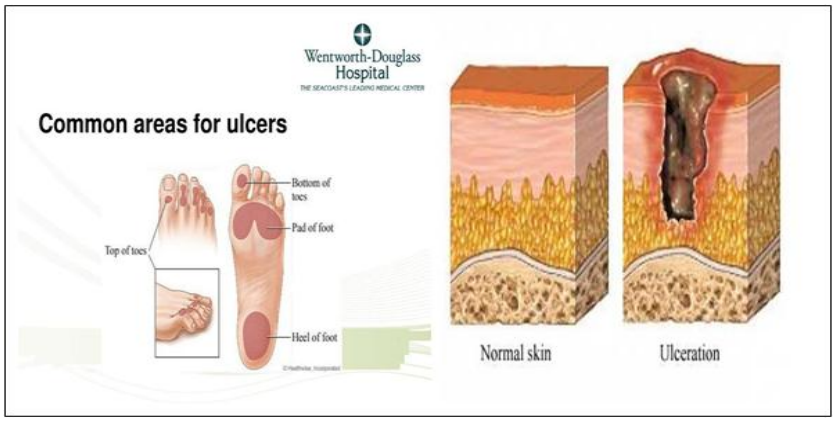


Fig. 04: Common area of Ulcer and skin Anatomy during Ulcer.

Ulcers are open wounds in your skin that can take on almost any shape. Some shapes are more common than others on specific parts of your body. For example, ulcers on your foot or toe might be shaped like a crater or a wedge.

Foot and toe ulcers vary in color. The most common colors are:

- Yellow.
- Pink.
- Red.
- Grey.
- Black.

If your ulcer is black, that means cells in the tissues have died. This is called necrosis (gangrene).

There are many different sizes of ulcers. They start as small as 1 centimeter wide (about the size of a pea or a Cheerio) and can grow to the size of your entire foot if left untreated.

The depth of the ulcer can change, too. Several different classification systems exist to define the depth of an ulcer. The Wagner Diabetic Foot Ulcer Grade Classification System, for example, has six grades:

- Grade 0: Your skin is intact (undamaged).
- Grade 1: The ulcer is "superficial," which means that the skin is broken but the wound is shallow (in the upper layers of the skin).
- Grade 2: The ulcer is a "deep" wound.
- Grade 3: Part of the bone in your foot is visible.
- Grade 4: The forefront of your foot (the section closest to your toes) has gangrene (necrosis).
- Grade 5: The entire foot has gangrene.

When an ulcer is starting to develop on your foot or toe, you might notice changes in your skin like:

- Dry skin.
- Cracked skin.
- Scaly skin.
- Redness.
- Rashes.

As the ulcer gets worse, it can get wider, and longer and deeper sometimes down to the bone. In advanced stages you might see:

- A callus.
- A halo (ring) around the center of the wound that feels harder than the skin around it.
- Drainage (you might see this in your socks when you take them off), which is a sign that you might have an infection.
- A brown discoloration.
- A strong odor.

IV. Diagnosis of Ulcer (Qarha)

Your healthcare provider can tell what type of ulcer you have based on four observations:

- The appearance of the ulcer.
- Location of the ulcer.
- The appearance of the borders.
- The appearance of the surrounding skin.

Your primary healthcare provider can diagnose an ulcer, but they might send you to a specialist for treatment. You might see a podiatrist, a provider who works with feet, or a wound specialist. For more complicated cases that require surgery, you might also see a plastic surgeon, anesthesiologist, orthopedic surgeon and/or vascular surgeon. To find out precisely how deep the ulcer goes, and to see if it caused an infection in a nearby bone, they might order a:

- MRI.
- CT scan.
- X-ray.

Two types of ulcers can affect your Feet and Toes

A. Neurotrophic (diabetes-related) ulcers

Neurotrophic ulcers occur primarily in people with diabetes, although they can affect anyone who has impaired sensation in their feet. They can be found anywhere on your feet, but they usually develop on the parts of your feet and toes that are most sensitive to weight (pressure points). Neurotrophic ulcers don't cause pain. But they can be serious if they aren't treated promptly or they don't respond to treatment. A neurotrophic ulcer might be the following colors:

- Pink.

- Red.
- Brown.
- Black.
- Any combination of those colors.

The thin borders of the ulcers are "punched out," meaning that they're taller than the surrounding tissues.

B. Arterial ulcers

A condition called peripheral arterial disease can reduce blood flow to your extremities. When this happens, your foot tissue may start to die. The ulcers that form from reduced blood flow are called arterial ulcers. The word "arterial" means "relating to arteries." Arteries are blood vessels that transport blood from your heart to the rest of your body, including your feet and toes. Anyone can get an arterial ulcer, but people who smoke or have diabetes, high blood pressure or high cholesterol are at higher risk. Unlike neurotrophic ulcers, arterial ulcers can form on many parts of your body, including:

- On your heels.
- On the tips of your toes.
- Between your toes (Where your toes rub together).
- The bony parts of your feet and toes that rub against bed sheets, socks or shoes.
- The nail bed (If your toenail cuts into your skin, if your toenail was trimmed aggressively or if you had an ingrown toenail removed).

Arterial ulcers are

- Yellow.
- Brown.
- Grey.
- Black.

Arterial ulcers don't bleed. The borders and surrounding skin usually appear taller. If you have an infection or experience irritation, you might see swelling and redness around the base of the ulcer. The redness often turns to a pale white or yellow color if you elevate your leg. Arterial ulcers are typically very painful, especially at night.

V. Possible Causes of Ulcer (Qarha)

There are many possible reasons why you might get foot and toe ulcers. The most common causes include:

- Neuropathy from diabetes.
- Cellulitis, a common bacterial infection.
- Trauma to the foot or toe.
- Poor circulation (Caused by a variety of conditions).
- Peripheral arterial disease.
- Unusually formed toes.
- An unusual walk that puts too much pressure on one part of your foot or toe.
- Friction when your foot or toe rubs against the toe box of your shoe.

Although they don't cause ulcers, foot and toe ulcers are often found alongside toe conditions such as hammertoe, mallet toe and claw toe.

VI. Care and Treatment of Ulcer (Qarha)

The treatment of all ulcers begins with careful skin and foot care. Inspecting your skin is very important, especially for people with diabetes. Detecting and treating foot and toe sores early can help you prevent infection and keep the sore from getting worse. The goal of treating a foot or toe ulcer is to heal your wound and relieve any pain. Your treatment plan will be individualized based on what medical condition is causing your ulcers. If you can't correct the cause of your ulcer, it's likely to come back after treatment. There are both surgical and nonsurgical treatments for foot and toe ulcers. For early-stage foot and toe ulcers, nonsurgical treatments might work. More advanced ulcers — especially ones that are infected might require surgery.

Nonsurgical treatments include

- Topical wound care. (Ulcers have less of a risk of infection and heal faster if they're kept covered and moist.)
- Antibiotics.
- Antiplatelet or anticlotting medications.
- Compression clothes.
- Draining.
- Prosthetics.
- Orthotics.
- Removing pressure from the area by wearing a cast, a certain shoe or braces. You might need to use crutches or a wheelchair. This is called nonsurgical off-loading.
- Elevation of the foot.

Invasive and surgical treatments include

- Debridement (The removal of infected tissue).
- Hammertoe repair.
- Plantar exostectomy (The removal of parts of the sole of the foot).
- Achilles tendon lengthening (The stretching of the tendon).
- Metatarsal osteotomies (The metatarsal bone of the big toe is cut and realigned).
- Shaving or removing bones.
- Tenotomy (The removal of scar tissue).
- Reconstructive surgery using skin grafts.

Your healthcare provider might teach you how to care for your ulcers at home. You might be instructed to:

- Wash the affected area with mild soap.
- Keep the wound clean and dry.
- Change the bandages as directed.
- Take prescribed medications as directed.
- Drink plenty of fluids. Ask your healthcare provider how much water you should drink every day.
- Follow a healthy diet, as recommended by your healthcare provider.
- Exercise regularly, under your healthcare provider's care.
- Wear appropriate shoes.
- Wear compression wraps as directed.

VII. Reduce risk of foot and toe Ulcer (Qarha)

There are several things you can do to help reduce your risk of getting foot and toe ulcers. Sometimes, adopting these habits can even stop them from coming back. Try to:

- Manage your diabetes. If you have diabetes you should wear appropriate footwear and never walk barefoot.
- Examine your legs as well as the tops and bottoms of your feet and the areas between your toes every day. Look for any blisters, cuts, cracks, scratches or other sores. Also check for redness, increased warmth, ingrown toenails, corns and calluses. Use a mirror to view your leg or foot if necessary. If it's difficult to see, ask a family member to look at the area for you. See a healthcare provider immediately if you notice any problems.
- Talk to your healthcare provider about ways you can stop smoking.
- Manage your blood pressure.
- Regulate your cholesterol and triglyceride levels by changing your diet. Limit salt in your diet.
- Care for your toenails frequently. Cut your toenails after bathing, when they are soft. Cut toenails straight across and smooth with a nail file. Take care of ingrown toenails.
- Exercise.
- Maintain a healthy weight.
- See your podiatrist often.
- Wear appropriate shoes and socks. Talk to your podiatrist about what you need.

VIII. Management of Ulcer (Qarha)

Diabetes complications can include nerve damage and poor blood circulation. These problems can lead to skin sores (ulcers) on the feet that can get worse quickly. The good news is that managing your diabetes and taking care of your feet can help prevent foot ulcers. When you get a foot ulcer, it's important to get care immediately. Most lower leg and foot removals begin with foot ulcers. An ulcer that won't heal causes severe damage to tissues and bone. It may require surgical removal (amputation) of a toe, a foot or part of a leg. Some people with diabetes are at higher risk than others. Factors that lead to a higher risk of amputation include:

- High blood sugar levels
- Smoking
- Nerve damage in the feet (peripheral neuropathy)
- Calluses or corns
- Foot deformities
- Poor blood circulation to the arms and legs (peripheral artery disease)
- A history of foot ulcers
- A past amputation
- Vision problems
- Kidney disease
- High blood pressure, above 140/80 millimeters of mercury (mm Hg)

Here's how to keep your feet healthy, how to know the signs that mean you need to see a health care provider and what happens if you need an amputation.

IX. Prevention of ulcers (Qarha)

The best way to prevent complications of diabetes including foot ulcers is to manage your diabetes. This includes eating a healthy diet, exercising regularly, checking your blood sugar regularly and taking your medicine correctly.

Taking care of your feet will help prevent problems. It can also ensure you get medical care quickly when you see problems. Proper foot care includes the following.

- **Look at your feet daily.** Check your feet once a day for blisters, cuts, cracks, sores, redness, tenderness or swelling. If you have trouble reaching your feet, use a hand mirror to see the bottoms of your feet. Put the mirror on the floor if you can't hold it, or ask someone to help you.

- **Wash your feet every day.** Wash your feet in lukewarm (not hot) water once a day. Dry them gently, especially between the toes. Use a pumice stone to gently rub the skin where calluses easily form. Put talcum powder or cornstarch between your toes to keep the skin dry. Use a moisturizing cream or lotion on the tops and bottoms of your feet to keep the skin soft. Preventing cracks in dry skin helps keep bacteria from getting in.

- **Don't remove calluses or other foot lesions yourself.** To avoid hurting your skin, don't use a nail file, nail clipper or scissors on calluses, corns or warts. Don't use chemical wart removers. See your provider or foot specialist (podiatrist) to remove any of these issues.

Fig. 05: Safety & Precaution in Ulcer Dressing.

- **Cut your toenails carefully.** Cut your nails straight across. Carefully file sharp ends with an emery board. Ask someone for help if you can't trim your nails yourself.

- **Don't go barefoot.** To keep from hurting your feet, don't go barefoot, even around your house.

- **Wear clean, dry socks.** Wear socks made of material that pulls sweat away from your skin. This includes cotton and special acrylic fibers — not nylon. Don't wear socks with tight elastic bands. These bands reduce circulation. Avoid socks with seams that could irritate your skin.

- **Buy shoes that fit correctly.** Buy comfortable shoes that provide support and cushioning for the heel, arch and ball of the foot. Avoid tightfitting shoes and high heels or narrow shoes that crowd your toes. If one foot is bigger than the other, buy shoes in the larger size. Your provider may recommend specially designed shoes (orthopedic shoes). These shoes fit the exact shape of your feet, cushion your feet and make sure your weight is the same on both feet.

- **Don't smoke.** Smoking makes it harder for your blood to go through your body. It also reduces the amount of oxygen in your blood. These problems can make wounds worse and slow down healing. Talk to your provider if you need help quitting smoking.

- **Schedule regular foot checkups.** Your provider or podiatrist can look at your feet for signs of nerve damage, poor circulation or other foot problems. Have a foot exam at least once a year or more often if recommended by your provider.

Contact your provider if your feet have

- Ingrown toenails
- Blisters
- Flesh-colored bumps with dark specks (plantar warts) on the bottoms of your feet
- Athlete's foot
- An open sore or bleeding
- Swelling
- Redness
- Warmth in one area
- Pain (though you may not feel anything if you have nerve damage)
- Discolored skin
- A foul odor
- An ulcer that lasts longer than 1 to 2 weeks
- An ulcer bigger than 3/4 inch (2 centimeters)
- A sore that doesn't quickly begin to heal
- An ulcer so deep you can see the bone underneath

Your provider will look at your foot to figure out what is wrong and prescribe a course of treatment. Treatments for foot ulcers depend on the wound. Most of the time, the treatment is to remove dead tissue or debris, keep the wound clean, and help with healing. Wounds need to be checked often, at least every 1 to 4 weeks. When the ulcer causes severe loss of tissue or an infection that threatens your life, an amputation may be the only treatment.

A surgeon will remove the damaged tissue and keep as much healthy tissue as possible. After surgery, you'll stay in the hospital for a few days. It may take 4 to 6 weeks for your wound to heal completely.

In addition to your provider and surgeon, other medical professionals involved in your treatment may include:

- **An endocrinologist,** who is a physician with special training in the treatment of diabetes and other hormone-related disorders.
- **A physical therapist,** who can help you regain strength, balance and coordination. A physical therapist can also teach you how to use an artificial (prosthetic) limb, a wheelchair or other devices to help you move around better.
- **An occupational therapist,** who specializes in therapy to improve everyday skills. This can include teaching you how to use products to help with everyday activities.
- **A mental health provider,** such as a psychologist or psychiatrist, who can help you address your feelings about the amputation or cope with how other people react.
- **A social worker,** who can assist with finding services and planning for changes in care.

Even after amputation, it's important to follow your diabetes treatment plan. People who've had one amputation are at higher risk of having another. Eating healthy foods, exercising regularly, controlling your blood sugar and not smoking can help you prevent more diabetes complications.

X. Herbal treatment of ulcer

A. Hepar sulph

Hepar Sulph is one of the most common medicines for treating diabetic foot ulcers. Hepar Sulph is made by combining the inner layer of oyster shells with flowers of sulfur and then burning them together. The medicine prevents the formation of pus in the ulcer. If the pus has already formed, the medicine speeds up the pointing and discharge of the pus so that it can heal properly. This medicine also helps reduce the inflammation, pain, and burning sensation of the diabetic foot ulcer.

B. Cumini (Black plum)

S.Cumini is a great remedy for diabetes and foot ulcers. S.Cumini is derived from the Jambolan (Jamun) or Black Plum. Both the bark and the fruit of Jamun have excellent medicinal properties. Cumini has anti-inflammatory and antioxidant properties and therefore subsides the swelling and inflammation of the diabetic foot wounds. S. Cumini also has anti-diabetic properties

and thus keeps a check on the blood sugar levels, thereby preventing the worsening of the ulcer. In addition to these properties, S. Cumini also purifies the blood and significantly improves the condition of the foot ulcer.

C. Conium

Conium can be another useful medicine for foot ulcers. It is derived from a flowering plant called Hemlock. Instead of working directly on the diabetic foot ulcer, it works on the nerves in the body. It treats the numbness and loss of sensation caused due to prolonged diabetes. Therefore, it helps to identify diabetic foot wounds in the initial stages only. However, you should not take this medicine without proper consultation with a homeopathic doctor. Otherwise, it can have severe side-effects that can act like a poison in excess amounts.

Fig. 06: Hepar sulph and Black Jamun used in Treatment of Ulcer.

D. Calendula (Marigold)

Calendula is a homeopathic medicine with numerous benefits in the case of foot ulcers. This homeopathic remedy is derived from a plant commonly known as "Pot Marigold". For treating foot ulcers, calendula works best when you use it topically. Calendula gels or sprays directly on the diabetic foot ulcer produce great results and hasten the healing of the wound. Calendula extract has anti-inflammatory, antioxidant, and anti-microbial effects. Thus, homeopathic remedy prevents and treats infections in the diabetic foot ulcer. Calendula reduces the foul odor of the foot ulcer and facilitates the growth of new tissues, thereby promoting faster healing.

E. Aconitum napellus

Aconitum Napellus is a medicine that is made from the Aconitum plant. The roots of this plant have medicinal properties. Aconitum Napellus is very often used in the management of foot ulcers. Aconitum Napellus is widely prescribed for the treatment of acute foot ulcers. It reduces the redness, soreness, and swelling of the foot ulcer. Aconitum Napellus also subsides the numbness, burning, and tingling sensation of the foot wound and promotes wound healing.

Fig. 7: Marigold and Aconite used in Treatment of Ulcer.

CONCLUSION

Many different civilisations practiced different modes of treatment for Ulcer and wound management. All of them have contributed to the development and advancement of wound care practices. The principle of management of Ulcer or wound as we see today is nothing but a combined and advanced emergence of those that our ancient physicians practiced. The following aspects should be considered to prevent ulcer progression and promote ulcer healing: (1) Choosing a proper

classification to summarize the clinical details for further management and for auditing clinical outcomes; (2) Investigating risk factors that may predict the occurrence and promote the progression of ulcers; and (3) Employing validated interdisciplinary DFU management and care pathways, and emphasizing the cultivation of patient compliance. The findings highlight the need for the development and application of more relevant prevention and treatment measures in the clinical management of DFU.

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