

GANGRENE

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Gangrene is the term applied to the death of body tissues. When the circulation of blood to a part of the body is so damaged that the tissues can no longer get nourishment or dispose of their waste products, the result is gangrene. Once dead, cells must inevitably cease to function. The presence of groups of dead cells leads to changes in the surrounding tissues. The area becomes invaded by leucocytes from the blood vessels. These cells break down and absorb the dead tissues, leaving cystic cavities. Not only leucocytes invade the area in large numbers but other tissue cells multiply and fibrous capsule tends to form around the necrosed area.

Among the principal causes are conditions that block blood flow for any length of time, such as, crushing injuries—which may actually destroy the cells, freezing cold (Frostbite), burns, caustic chemicals (e.g. Phenol), mechanical pressure, e.g. a tight tourniquet kept on too long; Ergot poisoning; Raynaud's disease, KIDNEY TROUBLE; and DIABETES, which may have serious effects on the blood vessels. Toxins, indirectly have the same effects because they often act on the blood vessels, causing a clotting of the blood and so cutting off the nutrition to the cells.

Severe inflammation resulting in thrombosis of vessels may lead to necrosis and gangrene. Bedsores are areas of gangrene and are the result of continued pressure, causing diminution of blood to the skin and superficial tissues.

Types:—

1. Dry gangrene,
2. Moist gangrene,
3. Gas gangrene,
4. Hospital gangrene.

Dry gangrene—Most commonly it occurs in aged people and diabetics and principally affects feet and toes. When the blood supply is cut off, area gradually shrinks in size and becomes black in colour because the haemoglobin of the red blood corpuscles is broken up when these cells are liberated by the disintegration of the vessels. Its pigments are, therefore, freed causing straining of the tissues. Gradually a sharp line of demarcation, consisting of inflammatory granulation tissue appears between the dead and living tissue and eventually the dead area completely disappears.

Moist gangrene—In this affected part is swollen, blistered, green or black in some areas, unusually offensive odours, and the line of demarcation is not so sharp.

In this type, bacteria usually invade, which can enter the blood streams and become generalized, thus cause infection. One great danger of this moist

gangrene is absorption of toxins into the blood stream with subsequent severe toxæmia and death.

Gas gangrene—In World War I and in the Spanish Civil War of 1936, it posed a great problem for the military surgeons and was called "Red Death". It is the result of the infection of dirty, lacerated wound by any one of severe air-heating (anaerobic) gas-forming microbes, notably *Clostridium Welchii*. The gas spreads through the muscles so that they give off a cracking sound when touched. The tissues become an angry red colour at first, then yellow, finally black.

Hospital gangrene—So called hospital gangrene associated with pus, infection and failure of wound to heal, is no more seen in a modern hospital where aseptic surgery is practised.

General Treatment—Treatment for dry gangrene is to keep the part as dry and comfortable as possible.

In moist gangrene the first and foremost step which should be taken is to cleanse the gangrenous surface, then thick antiseptic dressing (some authorities advise a plaster cast) is applied to dry it up. Sometimes the blood transfusion is advised to combat deficiency of blood.

Homœopathic Approach

Although there are numerous homœopathic remedies to retard or to prevent its progress and to treat it, but with more careful selection they can shrink to relatively smaller number.

Anthracinum: This nosode has proven a great remedy in septic inflammation, gas gangrene and malignant ulcers. Black and blue blisters, gangrenous parotitis, succession of boils, and foul secretions indicate this remedy.

Ammonium causticum: This is remarkable remedy for senile gangrene. The oedema and ulceration of tissues produced by this powerful drug are utilised as guiding symptoms for its use.

Antimonium crudum: Dry gangrene. Burning and itching, worse at night. Patient, most often, is obese and is excessively irritable and fretful.

Arnica: This is one of the most useful remedies in gangrene following contusions. The skin is black and blue and patient gets distressing itching and burning sensations.

Arsenic: Dry gangrene in old people. Soreness and burning relieved by warmth. Itching, burning, swelling, oedema; eruptions, dry and rough may be with offensive discharge. Debility, exhaustion and restlessness with nightly aggravation, are most important of its general symptoms which often lead to its successful application.

It is often indicated in gangrene of the lungs (Dewey).

Bothrops lanc.: Its venom is most coagulative. Symptomatology of thrombosis and also thrombotic phenomena can always be expected under this remedy. Skin swollen, livid, cold with hæmorrhagic infiltration with swollen lymphatics. This is worth remembering in gangrene due to poisoning.

Calendula: A most remarkable healing agent. It is applied locally, used for dressing. This promotes healthy granulations and rapid healing and has got great power to produce local exudation and helps to make acrid discharge healthy and free.

Carbo veg.: This suits to moist gangrene in cachectic persons who are sluggish, fat, lazy and lack in vitality. In senile gangrene, which begins in toes; carbuncles, boils and indolent ulcers with ichorous, offensive discharge, tend to become gangrenous. Parts have a livid purple look and they are icy cold.

Crotalus: Moist gangrene, the limb being covered with boils, carbuncles, black blisters, much swollen, eruptions are surrounded by purplish, mottled skin and oedema; emits a foul odour.

Lachesis: Dr. Franklin has recommended this remedy highly in gangrene, saying that it is eminently curative of gangrenous affections. Boils, carbuncles, ulcers with bluish, purple surrounding and blue black swellings. It is useful for traumatic and senile gangrene.

Secale: This produces an anaemic condition, coldness, numbness, petechiae, mortification, gangrene. A useful remedy for old people with shrivelled skin, thin, scrawny women. Dr. Dewey claims that he has recorded cure of a number of cases of gangrene by this remedy. The skin is dry, cold, no sensibility, black and free from foetor. Large ecchymoses and blood blisters which tend to become gangrenous indicate its use.

Dry gangrene, starting from toes, develops slowly. Symptoms get aggravated by warmth (a differential indication from Arsenic).

In addition to these remedies, Ail.; Brass.; Brom.; Canth.; Carbo ac.; Cepa.; Chlorum.; Cinch.; ECHIN.; Euphorb.; Kali phos; Fer. phos.; Kreos.; Ran ac.; SULPHUR; etc. are also worth keeping in mind while treating gangrene.

Surgical Intervention—In neglected and ill treated cases or cases where remedies cannot do much surgical intervention is called for, to help the patient. Most often the amputation of the part becomes the only alternative to save the patient.

For amputees Prosthetic devices (artificial limbs etc.) prove to be a great boon for rehabilitation of such patients.
