

THE TANNIC ACID TREATMENT OF SCALDS AND BURNS.*

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To my mind, no advance in surgery has been more important than the tannic acid treatment of burns and scalds which was first introduced in 1925. This treatment has saved many lives and has changed the nursing of these injuries from a martyrdom to almost a pleasure.

In the past we have all been too familiar with the extensively burned patient, often a child who, if recovering from the initial shock, was then dreadfully ill, and often died of toxæmia. All nurses of experience have had the agony of dressing extensive suppurating burnt areas in a crying, hurt child.

The tannic acid treatment has changed all this, in that the initial shock is efficiently combated with the application of this method and subsequent toxæmia is prevented by the coagulum formed, which locks up the toxins. Further, this leathery covering over the otherwise raw area is painless, and nothing is more striking than the well-being of the patient.

SCOPE.

This treatment can be used as late as seventy-two hours after the injury, and is independent of any previous treatment which may have been used.

TANNIC ACID SOLUTION.

The solution must be freshly prepared, for if kept the tannic acid changes into unsuitable gallic acid. In fact, it is now advised to prepare it separately for each application.

We have been accustomed to use a 2½ per cent. solution, but lately a 5 per cent. solution (half a drachm of tannic acid powder to one ounce of water) has been recommended as being more rapid in producing the desired coagulum. The solution is used at a temperature of 110 degrees F. and is sprayed on with an ordinary atomiser.

TREATMENT.

On admission, shock is treated on the usual lines, but it is our practice to administer open ether as soon as possible and clean all the burnt areas. This is done with gauze soaked in ether, which will scrub off most of the damaged tissue. Blisters are opened and tough, loose pieces of skin cut off with scissors. Often in severe cases an alarming amount of tissue is removed, but none should be left, and undamaged skin is not influenced by the firm application of ether-soaked gauze.

Having rapidly got rid of all burned tissue, spray the raw areas with the tannic acid solution.

An ordinary throat spray with a fine nozzle is excellent for the purpose.

We do not cover the areas at all, but place the patient under a hot air cradle at once and continue to spray every half hour. This heat bath not only dries the application but is most efficient in treating shock. In some hospitals an electric hair drier is used to dry the applications.

The tannic acid forms a coagulum on the raw areas—at first brown and then black. When firm and black, no further applications are necessary to that part. The number of applications necessary vary according to depth of the burn, but usually about fifteen are required with the 2½ per cent. solution. The patient is still kept under the hot air cradle until all shock has passed off.

In the case of burns both back and front, keep the worst area uppermost and treat the underlying areas with gauze compresses wrung out in the solution.

DANGERS.

1. Needless to say, children especially must be watched and restrained from coming in contact with the electric globes in the cradle.

2. Tannic acid solution must not be allowed to come in contact with the eyes, external auditory meatus, or nostrils. These must be protected at each spraying.

3. No water must come in contact with the coagulum for it will liberate toxins. A death is recorded owing to foment being applied to the septic edge of the coagulum. It is therefore necessary to allow as little soiling by urine and fæces as is avoidable in burns of the buttock, etc.

RESULTS.

The burns and scalds are covered with a black leathery, painless covering, and in most cases, healing proceeds underneath with a minimum of scarring. The coagulum is allowed to peel off, which it does in about three weeks. Any raw areas are dressed with a protective such as vaselined gauze.

In a few cases suppuration occurs under the covering and can be let out through holes in the raised areas.

The object of thorough removal of damaged tissue and cleansing with ether is to avoid this sepsis. In our experience it is advisable to nurse cases under a cradle and we find that areas that unavoidably come in contact with the bed are most likely to become septic.

In a recent *British Medical Journal* I read with interest that in marked sepsis the coagulum should be removed, the area gently cleansed with soap and water and then ether, and the treatment reapplied.

In this same article the author has modified the tannic acid treatment to an extent that will be most helpful to those situated away from the electric light. He applies closely and evenly over the burnt area a compress consisting of six layers of sterile gauze soaked in a solution of 2 per cent. tannic acid and 1 in 2,000 perchloride of mercury. This compress is firmly and evenly bandaged and the whole soaked with a spray of the same solution.

The dressing is then left in position until the scab separates, which it usually does on cutting the bandages in three weeks. If not, the dressing is left rebandaged until the separation is complete.

CONCLUSIONS.

The results in our hospital since using this treatment from 1929 onward have been most gratifying, and the large hospitals of the world have shown a reduction in the mortality from burns and scalds which has established the tannic acid treatment of burns and scalds as another advance in our art.

* From the *New Zealand Nursing Journal*.

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