On examination he was found to be suffering from a severe herpes zoster, involving the skin of the occipital, parietal, and frontal regions of the left side of the scalp, that of the left zygomatic area and of the left side of the chin being also affected. The distribution suggested involvement of the ganglia from which are derived the fifth cranial and the second cervical spinal nerves (fig. 2).

Further examination revealed the presence of a scattered and generalized papular, vesicular and pustular eruption of varicelliform character, slight associated pruritus being also present. There was no systemic upset.

He gave no history of any recent vaccination or inoculation, and stated that, as far as he knew, he had never at any time suffered from chickenpox.

On admission he was at once isolated, and the herpes treated by means of applications of surgical spirit and dusting powder, analgesics being also necessary to settle the troublesome headache. The eruption on the body was, as in the previous case, treated by means of dabbing with lotio calamin containing menthol.

As before, the generalized eruption quickly settled but the herpes proved slow to heal. The patient was discharged on July 23, 1940, but required a further two weeks' treatment before the latter condition had finally cleared up. The neuritic pain in this case, however, died gradually away as the skin healed, and on final discharge had entirely subsided.

As regards the above, it is interesting to observe that on neither occasion was any associated case of herpes zoster or varicella noted among the remaining patients in the Skin Department. The attached R.A.M.C. personnel were similarly unaffected.

The question of the causal virus in cases of zoster and varicella is an extremely interesting one and it is attractive to consider one condition to be a variant of the other and the cause to be a common organism. The well-known fact, however, that an attack of typical chickenpox may follow within a few weeks of a herpetic condition, when immunity should presumably be high, is very difficult to explain if this is the case.

My thanks are due to Dr. W. Martin, Medical Superintendent, Stobhill Hospital, Glasgow, and to Sister Collins of the X-ray Department of the Hospital, for their kindly co-operation and help with the photographs.

A SELF-OPERATING SYSTEM OF DRAINAGE BY SYPHONAGE.

BY CAPTAIN H. B. L. DIXON,
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During the wet season in the early months of the War, many gun-pits, slit trenches, projector pits and sound-locator pits were put out of action by flooding.

In many cases this might have been prevented by the provision of drains at the time of construction but, generally, there was such haste in their preparation and flooding took place so suddenly that many Searchlight Units found their sites inundated overnight.

Units of the Auxiliary Fire Service were called in and flooded pits, etc.,
were pumped dry, but some sites were so outlying that it was impossible
to rely upon such assistance and, in any case, the relief was of a very tem­
porary nature so a system of syphonage was evolved and was found to
operate very satisfactorily.

The principle upon which a syphon works is, perhaps, so well known
that elaboration is unnecessary, but it will simplify this suggestion if its
salient features and foibles are mentioned.

If an airtight tube is filled with water and one end inserted into a vessel
(which might be a gun-pit) and the other end released at a point lower than
the level of the water in the vessel it will discharge water at its lower end
until (a) the level of the water in the vessel has fallen to the exact level
of the lower end of the tube; (b) the vessel is emptied, in which case the
lower end of the tube has been set at a level below that of the bottom
of the vessel; (c) air has been allowed to enter the tube, in which case,
syphon action has been destroyed and the tube will again have to be filled
with water before action will recommence.

In the case of (b) above, it is almost certain that air will rush into the
tube, once all water has been drained from the vessel, and the condition
(c) will be automatically set up.

In practice, the condition (a) is the one to be aimed at and it follows
that before syphonage can be established certain topographical conditions
are essential. These are (1) there must be some fall in the land and
(2) water must be led away to a distance sufficient to ensure that, on its
discharge, it will not interfere with the operation of the site, due to flooding
at some other point.

On sites where there was a very appreciable slope, say a fall of one in
fifty, it was found more economical to dig a drain in the form of a trench
away from the flooded pit. A fall so slight as one in a hundred and twenty
has been satisfactorily applied to syphonage.

It would be of little use employing a syphon which would require to be
re-started whenever its services were required so, in its final setting, it
will be necessary to determine exactly to what level it shall empty a pit
and to ensure that air shall not enter at either end. To effect this a water
seal is made at each end of the tube. These are not complicated. At the
upper end the tube rests in a sump consisting of an oil drum, which always
contains water. At the lower end the tube is fixed with its mouth pointing
upwards so that it too is always filled with water. The level at which the
mouth is fixed determines the level to which the water falls in the sump.

Before describing the mode of dealing with an already flooded pit it
might be as well to outline the appearance of a site upon which the syphon
is in full operation.

In the gun pit, trench or projector pit from which the syphon is operating
a series of shallow drains has been dug, leading to a sump situated at the
lowest point, the sump consisting of a five gallon oil drum, open at the top,
with holes perforated through its upper half, sunk into the floor of the pit
and packed round with clinker. The drains are also filled with clinker and the pit or trench is equipped with duck boards. Neighbouring pits or trenches have been made to communicate with and drain into this common sump.

There is about eight inches of water in the sump but the floor of the pit appears quite dry.

The end of a hose pipe dips into this water to a point about an inch from the bottom of the sump and the pipe is firmly fastened to an "A" frame in such a manner that the end cannot be removed from the sump or brought above water level. The hose is of three-quarter inch internal diameter, and is not of an expensive pattern.

At a point on the lower aspect of the site there is a stake, firmly driven into the ground, to which the other end of the hose pipe is immovably fastened, with its mouth pointing skywards. This stake is about a hundred yards away from the pit and it is seen that a slow dribble of water emerges from the hose pipe at this end. The end is about two feet above ground level.

Between its ends the hose is buried, turf deep, to avoid injury and to protect it from frost.

If the fastenings are undone at this lower end and the mouth of the tube raised two inches it will be seen that the water falls to about two inches inside the hose and, if the end is fixed at this new level it will be seen that before it recommences to flow, the water in the sump has become two inches deeper. In this way a very fine adjustment can be carried out and, in practice, an adequate depth of water should be maintained in the sump, with the hose well below the surface as, in windy weather, the varying air pressures in the pit cause some surging in the water contained in the hose and the inertia of a hundred yards' column of water can cause a quite considerable lowering of the water level in so small a sump.

Continuous moderate rain has never caused appreciable flooding of pits equipped with such a syphon and such flooding as may occur following
Clavidual and other Notes

a cloudburst causes the syphon to operate with increased vigour owing to
the increased discrepancy between the level of the water in the pit and the
level of the outlet of the hose.

Human curiosity has been the sole cause of breakdown in the syphons
I have set up. There seems to be a fatal fascination about the upper end
of the hose and, in spite of warnings, men will lift it out of the sump to see
what is going on or, perhaps, what is not going on. Usually they interfere
during dry weather when, owing to a cessation of inflow there is also a cess­
atton of outflow which, no doubt, gives the impression that all is not well.
The only remedy is to fasten the hose very securely in place at both ends.

I anticipated that failure might arise from the separation of air from
the water contained in the hose, especially as it is retained under negative
pressure at its upper portions, but this has never materialized and one
syphon left strictly to itself for a period of five months gave uninterrupted
service until someone drove a pick into it and destroyed its action.

The filling of the hose with water is about the only other thing upon
which advice might be offered. This is done from the lower end and a
stirrup pump is the ideal instrument for the purpose. The pump and two
or three pails of water are carried to a point which may be judged amply
low enough to represent the approximate position of the ultimate outlet
and the hose is spread in a fairly straight line between this point and the
pit which it is intended to drain, leaving a sufficient length of hose at the
upper end to reach the bottom of the pit which is, presumably, full of water.

A man stands at the upper end, holding the hose aloft with its mouth
pointing upwards.

The pump is connected to the hose and the water from the pails is pumped
into the hose, working from one pail only, replenishing it as need be from
another pail and taking care that no air is sucked up and forced into the
hose during the operation.

The man at the upper end gives a hail when water commences to issue
from his end and a further half pail or so of water is pumped vigorously
through to force out any air that might still remain in the hose.

At a signal the man at the upper end places his thumb over the end of
the hose and plunges his hand, thumb still in place, under the water in the
pit. Pumping should continue throughout this operation which only takes
a few seconds.

Once the upper end is well submerged the pump is disconnected at the
lower end and, assuming that this is situated at a sufficiently low level, the
syphon commences to operate. If thought necessary a perforated tin may
be fastened to the upper end, to act as a filter, but care must be taken to
keep the end of the hose submerged whilst fixing this.

As the water level falls the speed of the syphon's action should be watched
and when there is only about three inches of water left it is a good plan to
seal both ends of the hose with corks during the digging and sinking of
the sump. This is, of course, a very dirty job in a pit which has been
flooded for some time but, in the summer, before flooding has taken place, most pits are fairly dry and a great deal of labour might be saved by preparing pits, etc., which are known, from previous experience, to be subject to flooding and installing the syphon before conditions make the task a difficult one.

Lastly, the final level of the outlet should be arrived at by a gradual process, an inch or two of adjustment being made at a time until the exact position has been found, when it should be very firmly fixed to its stake, as also should the upper end.

It is cheaper in the long run to buy new hose which can be held certain of being non-porous. Incidentally, hose which had lain out all through the winter and had been frozen solid with its content of water, was found to function quite satisfactorily in the spring, there being no fractures, and it retained its elasticity quite well.

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**Current Literature**


From an analysis of 63 cases of sympathetic ophthalmia, supported by a review of much recent literature, Irvine holds that if enucleation is to prevent the development of sympathetic uveitis, it must be done before two weeks have elapsed from the time of injury.

Once sympathetic uveitis has developed, enucleation of the exciting eye has no effect on the course of the disease, and this eye should be retained, if potentially useful, as it may eventually be the better eye. From the available data there is no indication that the exciting eye acts as a focus of infection "spilling over" into the sympathizing eye.

Considering the frequency of occurrence of sympathetic ophthalmia (1 per cent of all perforating injuries), attempts to save severely damaged eyes, especially if the lens is injured, are not justified if the other eye is normal. A distinct possibility of sympathetic uveitis must be considered when operation is contemplated on eyes nearly blind from any cause, as for instance, hemorrhagic glaucoma.

The progress of symptoms in the course of the disease may be of diagnostic importance: (a) The exciting eye is always irritable at the onset of symptoms in the sympathizing eye. (b) Keratic precipitates are nearly always present in the sympathizing eye, and make their appearance in this eye before they appear in the exciting eye. Uveitis developing about six weeks after injury or operation to the fellow eye, showing at the onset no keratic precipitates, has about a 10:1 probability of not being sympathetic uveitis.