

hands had changed colour from normal to a slight blackish tint. Thermal and tactile sensations were present. The heart showed accentuation of the first and reduplication of the second sound. There was no thickening of the smaller arteries felt by the fingers. No history of syphilis, etc.

In two or three days' time the discolouration deepened, the affected tips were cold and a bit tough, shrunken and wrinkled. The tip of the thumb of the right hand was also included in the process. Tactile and thermal sensations were gradually being lost and the parts looked lifeless. The radial arteries were beating regularly and with the same low tension as before. The patient had rather a bad cough, but took his food well and was apparently improving. He was hopeful, too, especially on being assured that, as he had been for some considerable time detailed for duty in the "langar-khana" or cook-room, disease had brought on the burning of his fingers (due to constant lifting of hot pots, etc.), but latent for a long time!

In a week's time, most of the tips had become jet-black, as though completely charred, wrinkled, hard, and shrunken, and absolutely devoid of all sensations. He was able to grasp a cup by the palm and fingers, but could not button his shirt. It was a pity to see this living man with dead finger-tips! Not all the phalanges were involved, the tips of most fingers and middle phalanges of some. In the case of the right thumb only the distal phalanx was affected.

The climate was very cold at the time, and exposed water used to freeze by morning. The patient was, however, comparatively well-protected from cold and drafts, that is, considering the exigences of active service in an out-of-the-way station.

I could not do anything for the unfortunate soldier beyond symptomatic and common-sense treatment, and the patient died soon afterwards.

I do not think it was frost-bite; I do not think it was embolic gangrene, due to endocarditis, as there was neither fever nor any sign of valvular affection. What I do think is that it was probably a gradual failing of the circulation, though I cannot say why the process did not start in the toes first. But this was perhaps because the feet were always properly covered, whereas the hands could not, for obvious reasons, remain so.

Such a phenomenon being unusual I have permitted myself to report it to the profession.

ACUTE "KODON" POISONING.

By ANAND SWARUP, M.B., B.S.,

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On the night of March 4th 1922, four cases of acute poisoning were brought to Tilhar dispensary in the district of Shahjehanpur by the police. There was an old woman aged 50 years, two little boys aged 9 and 12 and a man of about 22. All were unconscious at the

time. The pulse in every case was quick and small, and the extremities were cold. The woman and one boy could be roused on shouting, whereas the other two and particularly the young man were absolutely unconscious and did not respond to any stimulus. The stomach was washed out in each case, but great difficulty was experienced in the case of the young man, in which case a mouth-gag had to be applied before the stomach tube could be passed. Particles of food of a blackish colour were removed from the stomach. Three recovered consciousness within an hour, but the fourth patient, the young man, baffled all efforts. After the washing out of his stomach he opened his eyes and began to struggle, but was otherwise unconscious of his surroundings. He could not sit or stand, and resisted interference so that when an attempt was made to give him a dose of stimulant mixture he clenched his teeth and his limbs became stiff when an attempt was made to move them. On the other hand if he was left undisturbed he lay flat on his back quite calm and unconscious. He was then left to himself in a bed, well covered with blankets, a dose of stimulant mixture was administered by the help of the gag. Hot tea was given after some time. The patient rallied in the morning. His pulse became much better, and he could be roused on shouting and gradually began to answer questions.

The three other patients who had become conscious continued to vomit for several hours, and showed a continuous shaking of their bodies, particularly of the upper extremities as if they were shivering from cold, and this continued even when they were well covered with blankets and also later on when they were sitting in the sun.

There was no diarrhoea, thus showing absence of intestinal irritation. The pupils were examined by daylight. They were normal as regards size and reflexes. The respiratory system was not affected.

It appeared from the statement of the patients as well as from the police report that the patients had taken that evening bread made from some flour of "Kodon." About an hour and a half after taking their meal they were attacked by vomiting and giddiness and then all became unconscious.

The symptoms were quite distinct from those of *dhatūra* and opium poisonings, inasmuch as the pupils were normal, there was no dryness of the throat and the respiration was unaffected. The nervous system and the cardio-vascular system were markedly affected with some irritation of the stomach, but not the intestine, thus differing from ptomaine poisoning.

My attention was first directed to this kind of poisoning by a landholder at Tilhar. On the 27th of February 1922, he told me that all the members of a family in one of his villages were

suddenly attacked by vomiting and giddiness and then became unconscious and remained so the whole night till they came to their senses in the morning. All of them had taken bread made from "Kodon" meal, which had been purchased the same day from the neighbouring bazar. A dog which had also partaken of the same bread was similarly affected. A beggar who had also managed to get hold of one "chapati" of the same poisonous grain soon became unconscious after eating it. Unfortunately the hut in which he lived caught fire during the night and the unconscious man was burnt to death in it.

These cases of acute poisoning appear to me important because "Kodon" is not commonly mentioned as one of the grains which may develop poisonous properties on being stored. Lyon and Waddel mention Kodra poisoning, but I am unable to say whether "Kodra" and "Kodon" are one and the same.

Kodon is one of the cheapest grains and it is largely eaten by poor people in the United Provinces. The important point to investigate is under what conditions does Kodon become poisonous. Kodon poisoning must be fairly common in the United Provinces although cases do not come to the hospital.

Conclusions.—(i) 'Kodon,' a very common grain in United Provinces, develops poisonous properties under certain unknown conditions.

(ii) The poison chiefly affects the nervous and cardio-vascular systems, the chief symptoms being vomiting, giddiness, unconsciousness, small and rapid pulse, cold extremities, shaking of limbs, tremors and resistance to outside interference. The pupil is normal and there is no diarrhoea.

(iii) No fatal cases have yet been reported.

(iv) Treatment—Washing out the stomach, stimulants, hot tea or milk, warmth to the extremities.

Note.—"Kodon" or *Paspalum scrobiculatum* is a kind of millet, cases of poisoning with this grain have been recorded by Pyrie in the *Bombay Gazetteer*. Vol. XXV.—Ed., *Indian Medical Gazette*.

REMOVAL OF THE TONSILS.

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COLONEL BIRDWOOD'S article in your issue of March 1922 should be welcomed by a large number of practitioners in this country as making clear many points in technique.

As he states, Indians do not very frequently require removal of tonsils and I have had cases coming to me only at relatively long intervals. I have used the guillotine with more or less success, but frequently with difficulty and with the feeling that it is somewhat of a fluke as to how much of the tonsil one will manage to squeeze, cut, twist or pull away. Latterly, therefore, I have taken to enucleating them by dissection. I found that in freeing the faucial pillars a tenaculum is usually required and that this frequently tears

out of the tonsil tissue. I then in place of the tenaculum used what is known as a Kocker's Gland Forceps. These are in the Government Medical Store's Price List and a picture of them can be found in most instrument catalogues.

At times some freeing of the anterior pillars may be required before application of these toothed and ringed forceps, but when they are applied they comfortably and firmly embrace the whole gland. Any further freeing may be done with curved scissors and the tonsil is then twisted until it comes away. The slow twisting of the pedicle is comforting when one is thinking of subsequent hæmorrhage.

I have no doubt that the guillotine in practised hands and with those who do the operation almost daily is a very satisfactory instrument, but for those who only get an occasional case I am inclined to favour the method of dissection. The various steps in the manipulation of the guillotine although apparently quite simple may be a little difficult to remember unless one is frequently doing it.

I do not know for what purpose Kocker's Gland Forceps were originally designed and my experience has been that when I have found a gland over which they would nicely fit I have not been able to find the forceps and have used something else. Two sizes would be more useful when dealing with tonsils. I hope the suggestion of using them will help others as it has helped me.

INTRAVENOUS QUININE IN MALARIA.

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IN submitting this note on the *treatment of Malaria by Intravenous injections of Quinine* for publication in the Gazette, my object is to show by illustrative cases that this is the most convenient and rapid method of destroying the malarial parasites in the blood and thus bringing about a cure. The quinine that is administered by mouth, by rectum and by intramuscular injections is not wholly absorbed and the results in severe cases are disappointing whilst the intramuscular method is very painful, and in careless hands is attended with a grave risk of tetanus and also of abscess formation. I have used the Bihydrochlorate of Quinine in 5 to 10-grain doses dissolved in 20 c.c. of sterile water. From my own experience I can say that this is safe and a larger dilution is not essential. The technique of the operation is simple. A 20 c.c. serum syringe is carefully sterilised by boiling. The patient is made to lie down on a bed, the bend of the elbow is carefully washed with soap and water, dried and painted with rectified spirit (Tinct. Iodine blurs the outline of the veins). A piece of india-rubber tubing is tied around the arm and kept in position by an artery forceps to make the veins prominent and the patient is instructed to work his fingers