

Sterilize a needle and slightly scarify the sting, take equal parts of cream of tartar and powdered permanganate of potash, spread them over the area and sprinkle with water. The powders effervesce and the pain vanishes at once.

Fifty Years Ago

In 1885, just fifty years ago, there were no trained Indian nurses. It would be interesting to know how many there are to-day and to compare our progress with that of other nations.

Railway Concessions

We regret that owing to a misunderstanding some members have been seriously inconvenienced.

Concessions for return fares are not allowed, but a separate concession must be obtained for each journey. District Secretaries are asked to kindly cross out the phrase on the forms.

We are deeply indebted to the Railway Companies for their goodness to us, and are only too anxious to abide by their regulations.

Leaflets

The T.N.A.I. Mothecraft leaflets cost 4 Pies each, As. 3 a dozen, Re. 1-6 per hundred.

AN UP-TO-DATE RADIO THERAPEUTIC DEPARTMENT AND THE HAFKINE INSTITUTE

BY SISTER E. A. WORBY, S.R.N.,

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The Bombay Registration Act brought back to mind our 1934 T.N.A.I. Conference in Bombay and of our very pleasant and busy stay in that city. I wonder how many of the members attending the Conference at the Goculdas Tejpal Hospital, Bombay, realized that there was a most excellent Electro-Therapeutic Department in this Hospital. Sister Heathcote most capably conducts her work here. She showed Miss A. C. McA. Munro and myself around one morning, when a number of her patients were in the throes of treatment, and a long string of them awaiting their turn.

Sister has 17 apparatus in use in her department—

Two Diathermys—Three Radiant Heat Apparatus. Three Ultra Violet Rays Apparatus (one combined with water cooled). One Pantostat. One combined Faradic, and Galvanic Switch-board. Two Wall Galvanic Apparatus. Three multiple wave Generators (giving sinusoidal, galvanic and surging galvanic current).—One Victor's Galvanic Apparatus. One muscle testing apparatus.

There is one large general room for Massage and Electrical treatments. One room for Diathermy. One for Radiant Heat. One for Light, and one for Bath treatments. It was most interesting seeing all the treatments being given and hearing a bit about each case.

We shall in the future all feel the sad loss of Mrs. Chesney (late Matron of this hospital) from amidst us, a charming, capable and kindly soul, who made us so welcome at the Conference, which was such a success.

We wish Miss O'Sullivan good luck in her new post as Matron in the Goculdas Tejpal Hospital.

There was also another very interesting place we visited the following morning. It was the Haffkine Institute. Here we saw how snake venom was extracted. We were first shown into a large hall which contained several glass cases with snakes in them. Also there were several others in small tin boxes, with glass fronts. These boxes were arranged underneath the large glass cases. I was surprised to see so many cobras varying from dark to quite light shades of brown. Some were quite black, and yet another was almost a flesh pink colour! There were 67 cobras and 62 vipers. It was a very black, angry but handsome cobra, with evil little black beady eyes, which was first taken out for demonstration. An Indian boy, who had the reputation of never having been bitten, was deputed to open the box lid of this black cobra and catch him. He was most swift and deft in all his actions. The cobra was caught up by the tail, quickly, with a forward flinging action placed at length on the floor; as quickly, with a small rod in his left hand, he ran this along the snake's back to the neck, where he placed pressure, and quickly released the tail and caught the snake with his right hand, by the back of his neck in such a way as to make him open his jaws wide.

A wineglass with oilskin tied over the top was then placed between the snake's jaws. He immediately gripped the top and bottom of the bowl of the glass—in so doing, the fangs pierced the oilskin and we saw a thick yellow mid-straw coloured fluid, about $\frac{1}{2}$ drachm, drip into the glass, the doctor who was kindly showing us round laughingly said 'it was an amount enough to kill a regiment.' After this ejection of venom, the snake was fed with an egg-flip mixture—he was given about a wineglassful through a funnel, shaped like a wineglass at the top, ~~with an extra long tube instead of stem and stand, this tube end was~~ placed down the snake's throat and the measureful of egg and milk mixture run down through it into him—no tasting allowed! Then the attendant with encircled left hand fingers around the snake's body, stroked him down to better enable him to keep his feed down.

We were informed that whenever venom is extracted from a snake, he is always fed in this way. Ordinarily the snakes just get one rat each, a week! King cobras are not kept, they demand live rats!! This cobra was cleverly put back into his tin box, but was wildly angry for quite a time. He spread his hood to its fullest extent and repeatedly struck out at the glass pane of his box, through which he could see us. He streaked the glass with poison as he struck at it. The sacks which hold the poison below the fangs, we were told, fill in a space of about 5 minutes. The storehouse is a gland, and glands go on producing saliya or venom. The quantity of venom stored up or available in the glands is greater than is commonly believed.

After this we were shown a Russell's Viper. He bussed and sizzed,

making a sound as if there was a terrific escape of gas going on. This noise rose and fell for quite a time. At last the boy seized his opportunity and picked this snake up out of the box in exactly the same way as the cobra, and eventually as before related, held him by the back of his neck. The poison extracted, he too was fed and placed back into his tin box. The crescendo and diminuendo sounds of 'escaping gas' continued for quite a time.

Extracted cobra and Russell's viper teeth showed they were like small curved hypodermic needles without the sockets.

Snake venom turns into small crystals and these crystals are eventually used for making antivenin.

It was interesting to note, that the colours of the crystals varied in depth of colouration, some mid-amber, others lighter amber, and the scorpion's looked blackish. We had much else of interest to look at in this big hall, diagrams of people with tropical troubles, and photographs and drawings of several tropical bugs causing diseases in our hot clime. Altogether we felt well instructed and satisfied on our departure, thanks to the Principal and his obliging staff, for giving us so pleasant and interesting a morning.

I am indebted to the Director, Haffkine Institute, for giving me the following lucid notes of interest.

(1) Average amount of venom given at a time by a cobra is 580 mg. About the same quantity is given by a Russell's viper.

(2) When cobra venom is dried, its weight is reduced to $\frac{1}{3}$ the weight of wet venom.

(3) Minimum lethal dose of cobra venom for an adult is 15mg.

(4) Fangs of both the Cobra and Russell's Viper are hollow like hypodermic needles.

(5) Venom collected here is largely used for preparations of antivenin. The use of cobra venom for alleviating pain of cancer and that of Russell's viper for preventing haemorrhages, specially in hæmophilic cases is at present in the experimental stage.

It is interesting to note from an excellent article in the *Madras Mail* recently written by C. L. that the viper venom and cobra venom produce very different effects. Viper venom acts on the blood in two principal ways. First it weakens the lining of the walls of the blood vessel, thereby producing haemorrhage, the blood oozes through the vessels and membranes. Secondly and chiefly it makes the fibrin of the blood solidify, thereby clotting it. This clotting property has now been turned to use by the medical profession. A very small quantity of viper venom specially prepared is used in Hæmophilia.

Cobra venom acts principally on the nerve centres, and causes death by paralysis and suffocation, it has little action on the blood which remains liquid after death. Cobra venom destroys cancer in mice, and there are good grounds for believing that before long it will be used for the cure of cancer in man. Expressed differently, we say that viper blood contains much Haemorrhagin or blood poison and cobra venom Neurotoxin or nerve venom.

The tip of the fang and the lower end of the venom duct in the fang do not coincide; the end is a millimetre higher than the tip.

Hence it is possible to receive a scratch with a fang without any venom being injected, just as one may be scratched by the tip of a syringe without having the contents of the syringe injected. The syringe must be pushed home into the tissue, and the piston forced down. Similarly the fang must be driven into the flesh and the gland compressed for a bite to be effective. Hence scratches and some bites do not inject venom.

Of the cobra and the Russell's viper bites, it is understood that if cured of a cobra bite you really are cured—but effects of a viper bite may supervene years after the cure—and cause blindness, and if the potency of snake venom were noted, it would range something like this:—Cobra venom 100 per cent potency, the krait 200 per cent and the Russell's viper 50 per cent. In other words, the cobra is deadly, the krait is twice as deadly, the Russell's viper is half as deadly. Sea snakes are more deadly even than kraits.

It is generally believed that the tongue of the snake is poisonous. This is an error. The tongue in snakes is harmless. The tongue is used as a sort of feeler, to receive vibrations, like a beetle's antennae or a cat's whiskers. There seems to be some kind of additional sense. By means of its tongue, the snake somehow apprehends danger and investigates and satisfies itself whether all is well.

E. A. WORBY, S.R.N.

THE IDEAL DENTIST

BY RUTH GILBERTSEN

'Mummy, Jean won't let me play at being a tooth doctor', Dorothy called out from the back seat of the car when we were out for a drive yesterday. Without looking round to see what was the matter I said 'Oh! play nicely together, dears.' During the next few minutes we heard a series of chuckles and apparently all was going well. Presently there was a squeal and Jean called out 'Don't put it right into my mouth, Dorthy, I don't like it.' I slowed down and looked round to see what was wrong. Jean, aged three, was lying on her back, her mouth wide open. Dorothy, aged five, had one of the iron rods used for the side-curtains, was holding it perilously near Jean's mouth and was twisting it round and round. 'Whatever are you doing?' I asked, and both of them laughed heartily on being discovered.

'I'm playing at being a tooth-doctor,' said Dorothy, 'and I'm making Jean's teeth nice'. 'Look, they are beautiful, now,' and to prove it Jean opened her mouth wide and said 'See, Mummy, they are "booful" now. "Dorthy" did "dem".'

'What is that in your hand?' I asked.

'It is the tooth machine. Don't you know?' she answered.

This new game was a sequel to a series of visits to the dentist.

As Health Visitor and Infant Welfare Sister in a large town in the Midlands for a number of years, I met several dentists and formed my own opinion as to what an ideal dentist should be. When I became a mother and, in due course, wished to take my small daughter to visit the dentist, I was more than ever anxious to find the ideal dentist. I wished for Alladin's lamp so that I might call him up.