open to the risk of added virulent infection and acute symptoms supervening on the chronic. The professional or expert swimmer may possibly be excepted if the ear has been dry for two years or more, although the perforation has not healed, but every precaution must be taken as regards breathing and against the entry of water into the meatus. No form of precaution is "foolproof," though a small piece of wool impregnated with vaseline and laid in the meatus may serve a useful purpose. Better still, a thin piece of wool may be laid over this and kept in place with collodion. A successful radical operation, one year after complete healing, places the patient in Class 1 (healthy persons) as regards bathing. Patients with acute or chronic meatal eczema or recurrent attacks of meatal furunculosis are best advised not to bathe, for exacerbations are only too common.

Many swimmers who make a practice of diving into deep water complain that when they go beyond a certain depth they get a violent ringing in the ears. This is as a rule temporary; it is partially due to prolonged holding of the breath and partially to increased pressure on the tympanic membrane and stapes. Should it persist it will probably be found that there is some degree of Eustachian obstruction and retraction of the tympanic membrane and that politizerization will relieve the noises.

Conclusions.

1. There should be regular and frequent inspections of all public baths, and the water should be maintained as pure as possible.
2. All swimmers should be compelled to wash with soap under a shower before entering a public bath.
3. The public should be educated as regards correct breathing in the water.
4. "Ducking" and pushing people in should be discouraged.
5. Those persons with colds, septic nasal conditions, perforated ear drums, or recurrent inflammatory conditions of the external auditory meatus should not be allowed in public baths without leave from an aural surgeon.

ARSENICAL POISONING:

WITH SPECIAL REFERENCE TO TREATMENT WITH THE GALVANIC CURRENT.

BY

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THE following case is of exceptional interest both scientifically and also from the practical aspect. It suggests strongly that the continuous galvanic current should be used in cases of arsenical poisoning, and also in other cases in which it is found that the toxic factor carries a positive or negative charge.

Mr. X, aged 40, had been an arsenical worker from 1919 until September, 1928; during this period he had a number of attacks of "indigestion" and colic following exposures to arsenic, and also various sensory changes from time to time. On April 6th, 1929, a sudden "foot-drop" occurred, and he attended for treatment on April 10th.

On physical examination, voluntary movement involving the anterior tibial and peroneal groups of muscles was absent; the skin over the middle third of the right leg in front showed diminished sensation. The muscles were tested, and the electrical reactions showed a normal response to the faradic current with the exception of the extensor longus digitorum, which, however, reacted briskly to the galvanic current.

Treatment was carried out three times a week, the affected muscles being stimulated by interrupted galvanism. In addition, the continuous galvanic current was applied by means of foot-baths, and a pad was placed reaching up the shin of the right leg; the negative pole was attached to the bath, which contained the right foot. The idea of this was that arsenic would be likely to be present in the form of the hydrochloride, and that the alkalioid would be extracted by this means.

After about a fortnight it was noticed that the skin on the right leg was becoming markedly scaly, and as this was most unusual I suggested that arsenic was being extracted. In consequence of this I collected some of the fluid from the pad at the end of one treatment, and also a sample of scales which were brushed off the skin of the leg. Both these samples were tested by an expert analytical chemist, and arsenic was reported to be definitely present by Marsh's reaction.

After three weeks' treatment, voluntary movement of the peronei began to return, and was followed a fortnight later by the tibialis anticus. Treatment was terminated on May 30th, when the condition had almost approached the normal; the extensor longus digitorum would contract to galvanic stimuli, but not to the faradic current. A further test, on June 6th, revealed that all the muscles would contract to the faradic current. On June 20th the affected muscles had completely recovered, and normal sensation of the skin on the front of the right leg was found to be present.

The continuous galvanic current is known to have an attractive or repulsive action to all substances which carry a negative or positive charge. Medical electro-therapeutists are frequently criticized because they are unable to give proof of how their methods act, and it is always satisfactory when it is possible to do so without question or doubt.

Similar work to the above has been carried out, I believe, in cases of lead poisoning, and also in the treatment of gout, but I can find no case on record in which arsenic has definitely been proved to be present chemically following treatment by the galvanic current. There can be no doubt that a considerable quantity of arsenic was extracted in the course of treatment, and the rapid recovery of the patient suggests, further, that this is the correct procedure in these cases.

The Section.

SUMMARY OF PROCEEDINGS.

(Concluded from page 263.)

SECTION OF MEDICINE.

Friday, July 26th.

ASTHMA.

DR. F. PARKES WEBER occupied the chair on the third morning of this Section, and called upon Dr. ARTHUR F. HURST to open a discussion on asthma. Dr. Hurst began by remarking that the oft-repeated hopes of a panacea were still far from realization. He drew attention to the importance of studying the constitution or diatheses of sufferers from asthma. There must be a lack of balance, due to some chemical cause, between the vagus and the sympathetic system, in asthmatic persons, resulting in a preponderant activity of that part of the vagal nuclei that regulated the contraction of the bronchial unstriated muscle. He further discussed the subject of abnormal sensitiveness to proteins and other chemical substances; the nasal and other conditions that might give rise to reflex asthma; and the psychological factors that might bring on asthma in any asthmatic subject. As for treatment, the only cure should be a change in the constitution or in the chemistry of the blood of the asthmatic person; the diet must always be a matter of great importance, and so must altitude. The skin tests he described as valueless in asthma, though in hay fever they were often valuable. Nasal treatment he thought was often most useful in selected cases. Asthma powders he condemned; but the use of adrenaline was commended on physiological grounds. In status asthmaticus the continuous injection of adrenaline in small quantities (up to even a drachm in half an hour) was the only cure. Dr. JAMES ADAM (Glasgow) said that for thirty years he had held that there was a toxic basis in asthma and that in most cases the nasal condition was a most important factor. This toxæmia, which originated in the intestine and the tissues, was partly due to the absorption of nitrogenous poisons and partly to an error in nitrogenous metabolism, the result of imperfect oxidation or enzyme action. The toxæmia tended to show itself first as a catarrh and