

Santonin in internal diseases of the eye / by MM. Guepin and Falck.

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SANTONIN IN INTERNAL DISEASES OF THE EYE.

By MM. GUEPIN and FALCK.

REFERRING to M. Martini's communication upon this subject (a), M. Guépin, of Nantes, gives in the present paper an account of the results of the trials he has himself made with this substance. These trials form part of others instituted by him with different modes of treatment since 1838. These have led him to substitute for bleeding and leeching, cupping glasses, either dry or with scarifications, applied to the base of the cranium, the neck, or between the shoulders, and kept on always at least for ten minutes and sometimes for an hour, repeating them also as required. He has also almost abandoned the use of the blister and seton at the nape, especially as regards internal ophthalmias, only retaining blistering of the arms. He has also substituted for powerless flying blisters to the temples, forehead, and scalp, very active and prompt vesicatories consisting of camphorated oil two parts, and ammonia one part. They act both as agents of revulsion and resolution, through the absorption of ammonia. He has also employed frictions with the various preparations of iodine and ammonia applied to the temples, forehead, and upper eyelids. Without proscribing mercurials, he has much restricted their employment, joining with them, when used, the alkaline chlorides and iodhydrate of ammonia, and taking care to expel them afterwards from the economy. The narcotics, such as atropia and morphia, he has always largely employed.

By these methods he believes he has procured arrest of progress, and even amelioration, in cataract. In pursuit of the various other means of modifying the endosmosis and capillary circulation of the tissues of the eye, the author has submitted santonin to an extensive trial in internal ophthalmias. Santonin, in the author's words, is a "photographic" substance, which changes to a yellow colour under the action of the sun, and in the interior of the economy, constantly rendering the retina yellow. Of about 100 persons, 3 only exhibited no modification in their vision, and one-half of the number perceived objects yellow for a short time only, about an hour after taking the santonin. In the others the vision was more decidedly yellow, and lasted so for a longer period. In one only it continued so for nearly twelve days after leaving off the santonin. In regard to the therapeutical action of the substance, given to the extent of six grains divided into two doses, morning and evening, it exerts a tolerably powerful action on the choroid and iris. In several patients who had been cured of iritis, but with exudations remaining, it gave rise to greater disposition to vomiting, or at least to nausea; while, in affections of the choroid, it reproduced the choroidean pains of the head, which are often confounded with cranial neuralgia. This has necessitated prudence, and has limited the number of cases in which the trials have been made. In general, after the first, or at most after the second dose, the urine has remained yellow, the vision being much less rapidly and less permanently modified. The action of the substance is in no wise proportioned to the doses given. The author interrupts the administration at the tenth dose, resuming it in a week or a fortnight, and goes on in the same manner for a second or third administration. The action of the santonin appears in many cases to be proportionate to its effects on the vision; but, in other cases, no such relation can be observed. In the subacute stage of iritis, it is often useful, and that when there has not been the least sensible anatomical modification in the condition of the eye produced. In other cases a partial detachment of exudations, which, until then, had resisted, takes place; sometimes amelioration is produced in the one eye, while the other gets worse without pain, the second eye improving, however, when other medicinal agents are combined with the santonin. In irido-choroiditis the same results are obtained. In acute choroiditis, which has been cured, but with a great reduction of visual power, and with exudations of variable extent, santonin may exert a favourable action, and may prevent the

formation of consecutive cataract. But while the subjective phenomena undergo a most favourable change, the objective continue very much the same; still, as M. Guépin observes, the attainment of a subjective amelioration in these cases, or in cataract, is a very important matter. In retino-choroidean amaurosis with exudations, M. Guépin does not think very highly of the remedy. He has employed it when there have been slight amaurotic pupillary dilatation, diplopia, and partial resorption of pigment as a consequence of retino-choroidean congestion, using cupping of the neck actively at the same time. Under these circumstances there has been but slight visual coloration of objects from the use of the medicine. To sum up,—santonin given to the extent of thirty grains, divided into ten doses to be taken in five days, produces good effects in the later stages of iritis, irido-choroiditis, and choroiditis with plastic exudation, when the inflammatory condition no longer persists. In other diseases of the eye, the results have been either negative, trifling, or mischievous. It very well admits of combination with atropia and the alteratives and resolvents of use in diseases of the eye, and it will be found of service providing iridian and choroidean amaurosis, accompanied by exudations, be not confounded with other descriptions of amaurosis.

Professor Falck, of Marburg, in relation to Dr. Martini's observations, gives an account of a series of experiments upon the action of santonin, and "santonin-soda," instituted by himself and Dr. Manns, one of his pupils. The santonin was injected into the veins, or under the skin of animals, or was introduced into the stomach. The following are some of the conclusions which he draws from the consideration of the results of these experiments, and from a review of all the other publications which have taken place upon the subject: 1. Santonin, and santonin-soda (prepared by boiling together equal weights of santonin, crystallised carbonate of soda and water), are two poisons undoubtedly possessed of medicinal qualities. 2. The direct introduction of a solution of santonin in weak spirit in a moderate quantity rapidly induces the death of the animal. 3. The santonin, and santonin-soda gain access to the blood when introduced under the cellular tissue, or into the stomach. 4. Under conditions, not as yet well ascertained, the santonin, and especially the santonin-soda, is transformed wholly, or in part, in the economy into a material which is discharged with the urine, and is detectible in the latter by means of caustic alkalis, which immediately redden the urine. This substance the author provisionally terms *Xanthopsin*. 5. This conversion of santonin into *xanthopsin* takes place, under certain conditions, in a very short time, while the elimination may be long continued. In one experiment the elimination commenced in thirty minutes; and in another, in which no large quantity of santonin was introduced, it continued during sixty hours. 6. Under the influence of santonin the urine soon assumes a peculiar yellow colour, dependent upon the same material, which is converted into a red colour by the action of the caustic alkalis. 7. After the evaporation of urine contaminated with santonin, the red colour ceases to be produced on the application of caustic alkalis. 8. As under the influence of santonin saffron-coloured urine is excreted, this may assume a red colour in consequence of the extrication of ammonia by the decomposition of the urea, or if alkalis are administered, with the santonin. This position is not, however, a result of direct experiment, but merely an inference. 9. Santonin exerts on the brain and visual organs a remarkable influence, inducing an incoherence of idea and chromatopsy. For the production of the latter large doses are always required. 10. The production of chromatopsy is in close connexion with that of *xanthopsin*. The more *xanthopsin* mingled with the blood, the more marked is the chromatopsy. 11. A direct introduction of a watery solution of santonin-soda into the eye does not induce chromatopsy. 12. The symptoms of poisoning by santonin vary much according to differences in proportions and conditions. Convulsions have almost always preceded the fatal results.—*Comptes Rendus*, tome 1. No. 17. *Bulletin de Thérapeutique*, tome lvi. pp. 500-505, and *Deutsche Klinik*, Nos. 27 and 28.

CASES OF SUDDEN BIRTH, WITH DROPPING OF THE CHILD.

Dr. Olshausen related some cases of this description to the Berlin Obstetrical Society. 1. Rosalie D., aged 23, a primipara, came to the Lying-in Establishment, after having had

(a) *Medical Times and Gazette*, April 28, p. 427.

weak pains for about twelve hours. While ascending the wooden staircase the child suddenly fell from her, striking its head against the stairs with a noise which was audible in an adjoining chamber. The infant showed all the signs of being full-timed, but it only weighed between five and six pounds. The funis, which was very gelatinous, was of an average length, and was torn through at three inches from the umbilicus, and no bleeding followed. At the time of the birth a true *caput succedaneum* was observed on the posterior part of the right parietal bone, stretching to the occipital; and when this had disappeared a cephalatoma gradually appeared at the same part of the parietal bone, and stretching from it, two fissures could be felt. The child, at first very well, afterwards became emaciated, and died when eighteen days old. At the post-mortem, at the seat of the cephalatoma, the periosteum was found separated from the bone, having effused blood beneath it, and a fissure, penetrating through the whole substance of the bone, was found extending $1\frac{1}{2}$ inches in length, from near the middle of the sagittal suture to the right parietal tuberosity—the middle of the fissure being the site of the cephalatoma. On the inner surface of the cranium an internal cephalatoma exactly corresponded to the external one. The cranial bones were moderately firm. There was no extravasation on the surface of the brain, but both it and its membranes were highly hyperæmic. 2. Alwine F., aged 21, having already borne a child, was seized with weak labour-pains which had only lasted two hours and a-half, when, while she was on her way to the Institution, the child suddenly fell on the pavement. The funis was torn through at its middle, and at first there was considerable hæmorrhage. The child, though full-timed, did not weigh much more than five pounds. A fissure was plainly felt stretching from the tuber parietale towards the sagittal suture, and having at its termination a slight depression of the bone. The fissure and depression were less perceptible as the child grew up, and at the age of 6 weeks could no longer be felt. 3. W. S., aged 26, having already had a child, was so suddenly delivered of a child in the Institution that it fell upon the wooden floor. The very gelatinous funis was torn through so closely to the umbilicus that it was ligatured once only with difficulty. No bleeding had occurred. The child died on the eighth day from phlebitis umbilicalis; but neither the skull or the brain exhibited any signs of injury. 4. Ernestine M., a primipara, aged 22, had had only ten pains, of which but four were severe, when the child suddenly fell on the floor. It was a small one, and quite healthy, and exhibited no signs of injury of the head. The funis was torn at five or six inches from the umbilicus, but no bleeding ensued, although it remained ten minutes untied.

In the two cases in which fissure of the cranium existed, the fissure took, as F. Weber says it always does, the direction of the osseous fibres from the centre of ossification towards a suture. In the first case death could not be referred to the injury, as the child, living eighteen days after its occurrence, died of atrophy, without having exhibited any cerebral symptoms—the cerebral hyperæmia found after death being frequently met with in new-born infants. All the children were small, but in one of the cases the mother had a contracted pelvis.—*Monatsschrift für Geburtskunde*, July, p. 33.

EXCERPTA MINORA.

Posture in Presentations of the Funis.—Dr. Brandeis of Louisville, relates three cases in proof of the advantage of treating presentation of the funis by placing the mother on her knees and elbows, and supporting the body with pillows in such a manner that the pelvis is kept a good deal higher than the chest. Reposition is then performed, and the patient kept in the position until strong pains come on. Even when the circulation of the funis is feeble it is soon restored after compression has been thus removed. For the success of the manœuvre it is requisite that the os uteri be dilated or dilatible, and the liquor amnii must be partly retained. If it has all escaped and the uterus is firmly contracted over the child's body, all efforts at reduction will be in vain. Collecting the statistics from various writers, Dr. Brandeis finds that 695 instances of prolapse have occurred in 177,184 labours, or 1 in 264; while in 743 instances of prolapse 408 still births occurred.—*Boston Journal*, vol. lxii. p. 379.

Successful Case of Ovariectomy.—Dr. Crosby relates in considerable detail the particulars of a successful case of ovariectomy. The patient was 36 years of age, and had two

children. The disease had existed for more than five years. It was a large unilocular tumour, the solid parts weighing rather more than 3 lbs., and the glairy contents less than 25 lbs. During the five years, 475 lbs. of fluid had been drawn off by tapping. Although long tormented by obstinate vomiting, she recovered so well that in five weeks she was enabled to direct her household affairs.—*Ibid.*, vol. lxii. p. 177.

Ovarian Cyst Successfully Injected with Iodine after Unsuccessful Attempt at Removal.—Dr. Wythes relates the case of a woman, aged 22, upon whom he undertook the operation of ovariectomy, but the sac being found universally and firmly adherent to the abdominal parietes and viscera, he was obliged to give up the attempt. This was on June 2, and on the 15th, after evacuating a pint and a-half of exceedingly offensive pus, he threw in through a catheter two ounces of tincture of iodine, and on the 17th, four ounces more. On the next day the contained fluids were found so coagulated that the mass was broken up with difficulty by the catheter. After several days, the sac having been well washed with tepid water, three ounces more were injected, and the injections were repeated every few days until the middle of July—using in all about a pint and a-half of the tincture, by which time the sac had so contracted as to admit but about an inch of the catheter. This was in 1858, and the patient has continued well since, only wearing an elastic abdominal bandage.—*North American Med. Chir. Rev.*, vol. iv. p. 482.

Case of Puerperal Convulsions Treated by Chloroform.—Dr. Charles Lee relates an interesting case of a primipara, whose urine was for some time prior to labour excessively loaded with albumen. Fearing the occurrence of convulsions, chloroform was given during labour, which lasted eight hours, in sufficient quantity to ensure perfect tranquillity. During the labour there were several threatenings of convulsive action, which, however, were removed by small inhalations; and it was not until an hour or two after the termination of the labour that violent convulsive paroxysms came on, and were repeated ten or twelve times in twelve hours. The fits continuing to increase in severity and frequency, and being at last followed by coma, constant watching of the patient was resorted to during the next forty-eight hours, causing her to breathe chloroform from a handkerchief upon the first appearance of any premonitory symptom. The consequence was that, although she continued unconscious for a much longer period, only one paroxysm recurred; and she was saved from what seemed a very desperate state of things, the pulse being above 150, and often too feeble to be counted. About fifteen ounces of chloroform were employed.—*American Journal of Medical Science*, July, p. 275.

Carbonate of Potash in Chronic Diseases of the Bones.—Dr. Pockels says he cannot sufficiently extol this as an application, in a concentrated form, in chronic diseases of the bones, especially caries and necrosis.—*Varges Zeitschrift*, vol. xiv. p. 7.

Poisoning an Infant with Morphia.—Dr. E. von Siebold relates the following case:—A full-sized healthy infant, three days old, was ordered, on account of some griping, an antacid powder, kept for use in the Göttingen Lying-in House, when by mischance there was substituted for it another powder, containing one-third of a grain of muriate of morphia. The child speedily fell into a soporific state; and in little more than an hour the author was called to it. He found the child with slow, rattling respiration, a scarcely perceptible pulse, livid countenance, and cyanotic lips. It was placed in a warm bath, while ice and cold water were applied to the head. These and all other means were tried in vain, and the child died seventeen and a-half hours after taking the morphia. The chief post-mortem appearances were saggillation under the scalp and a distended state of the cerebral sinuses, the brain itself exhibiting no bloody points.—*Monatsschrift für Geburtskunde*, band xvii. p. 62.

A LARGE quantity of very pure water is, and has been for many years past, daily pumped out of the chalk-pits at Grays, in Essex, into the Thames. Proposals are now made to utilise these 2,000,000 of gallons daily ejected from the pits.

A CHAIR of Naval Hygiene has been established at Toulon, in connexion with the School of Naval Medicine of that Port.