

Pediatrics, Sept. 15, 1898

ABSTRACTS

~~XXXII-A1~~

A CASE OF CHRONIC HYDROCEPHALUS DUE TO HEREDITARY SYPHILIS.

J. HELLER (*Deutsche Med. Wochenschr*, 1898, xxiv., 74). In 1892 Heller published a "case of chronic hydrocephalus due to hereditary syphilis," whose history was somewhat as follows: In June, 1890, Heller applied the forceps to a primipara, thirty-six years of age, on account of inefficient labor pains. The fact that in a primipara of this age no rupture of the perineum occurred, was sufficient proof that the head of the child was not pathologically enlarged. As the infant did not thrive on artificial food, a wet nurse, previously carefully examined by Heller, was engaged. At first the child seemed to improve in health, but soon commenced to droop again; distinct symptoms of enteritis and of atrophy made their appearance, and toward the end of July undoubted evidences of a syphilitic exanthem revealed themselves, which disappeared under specific treatment (corrosive sublimate baths) and calomel three times daily. At the same time the general health improved (feeding was continued during this period by the wet nurse who had been apprised of the nature of the disease), and in the early part of October the child was apparently as well developed both bodily and mentally as the average child of the same age. At the end of January, 1891, Heller had opportunity of again seeing the infant, who then presented a perfect picture of hydrocephalus chronicus. The head was shapelessly enlarged, the face remarkably small, the forehead very high, the parietal bones bulging prominently outward in the form of a balcony; the great fontanelle was as large as a man's hand, while the posterior fontanelle could be clearly outlined; the hair which had previously covered the head, the eyebrows, and eyelashes, in the normal manner was completely absent; the bald scalp was traversed by thick, blue interlaced veins, which showed conspicuously through the skin. The skull measurement at the chin and vertex and around the forehead at the level of the tubera frontalia, as well as in other diameters, exhibited a marked increase in size from the normal type. There were no convulsions. The mental condition of the patient was of an extremely low order. Antisyphilitic treatment (potassium iodide 1.0-2.0; 120.0, a teaspoonful three times a day, in all about 20 grs.) produced a retrogression of the symptoms, and in five months the patient presented no abnormal features. It may be mentioned that rachitis could be positively excluded. The case was decidedly one of hydrocephalus and syphilis, although it is true that the latter disease could not be proven (the father being unknown—the symptoms left little room for doubt on the matter). Nevertheless the questions might

be asked, may not a rachitic skull have been mistaken for a hydrocephalic head?

Did the patient really have hereditary syphilis?

Is it possible that such grave changes in the vessels could occur as we must suppose present in syphilitic hydrocephalus, the only preceding symptom of hereditary syphilis being a slight exanthem?

Both of these questions have been satisfactorily answered by time. Heller has followed the subsequent career of the patient, and has been able to see him several times each year. The child, who is seven and a half years old, has never had a symptom of rachitis; teething and the development of the osseous system took a perfectly normal course, and in fact at the age of from three to four he was to outward appearance large, strong, and very well grown, and free from convulsions, spasm of the glottis, etc. It may well be assumed that severe rachitis leading to hydrocephalus would have manifested itself in changes of the skull, as well as in other ways. Up to the close of his seventh year the child showed no further symptoms of hereditary syphilis, consequently all treatment was suspended. In the summer of 1897 he began to suffer from a bilateral ocular inflammation, an interstitial keratitis, which was appropriately treated. In August the child was again brought to Heller on account of a beginning bone affection which greatly affected the general health and presented the following symptoms: The skin and mucous membranes of the patient were anemic, although he had developed into a large boy for his age. By reflected light, an interstitial keratitis could be observed in both eyes; ophthalmoscopic examination of the fundus of the eye was found to be impossible. The reflex was normal. The upper incisors (second dentition) presented distinctly Hutchinson's changes. The left half of the lower lip showed a formation with a lardaceous deposit resembling a condyloma. The left tibia below its tuberosity presented a swelling about 4 c.m. long and $2\frac{1}{2}$ c.m. broad, which undoubtedly originated in the periosteum (periosteal gumma). On the left humerus was also a tumor, likewise a periosteal gumma situated anteriorly when the boy approximated the inner surface of the hand to the extremity about 1 c.m. above the epiphyseal margin; size, both in length and breadth, $4\frac{3}{4}$ c.m. Circumference of the arm over the swelling $18\frac{1}{2}$ c.m. (right arm 15 c.m., the skin covering the tumor was perfectly normal).

Treatment.—Immobilization of the joints; locally, mercury plaster; internally, potassium iodide (4.0-6.0, 200.0; a teaspoonful three times daily). When about 40 grs. of potassium iodide had been taken, the syrup of the iodide of iron was prescribed; the diet was carefully regulated; result, complete recovery. Heller took a Roentgen-ray photograph of this gumma at the height of its development, which gave an accurate representation. A shadow 6 c.m. long, resembling the segment of a circle, is seen in the skiagram at the site of the tumor lying on the inner side of the distinctly retained contour of the shadow of the humerus.

This shadow is 4-5 m.m. broad at its broadest point; its intensity is very variable in its different portions.

How can this shadow be explained? A tumor containing so little blood and lime salts as a gumma is not shown in a skiagram, or if it were

its form would be altogether different. Ossific changes, the formation of an exostosis, enlargement of the bone, could not be present. Apart from the fact that the clinical history, and its rapid disappearance are at variance with this conjecture, its demarcation from the normal contour of the humerus would not be possible in the skiagram. There can, therefore, be no doubt that the enlargement was due to a deposit of lime at the margin of the bone and the periosteal gumma. It is known that a solution of the lime salts takes place at the boundary of the bone in every periosteal gumma, the pathological designation of this being the so-called bone cicatrix; portions of the lime salts are then deposited in the gumma, so to speak, before they are absorbed. Thus the skiagram has reproduced with extraordinary fidelity a pathologic-anatomical process, corroborating the diagnosis and furnishing the proof that a grave form of hereditary lues was really present, which stood in an etiological relation to the previously appearing hydrocephala.

POISONING BY PETROLEUM IN CHILDHOOD.

C. BARON (*Der Kinderarzt, 1878, ix., 73*) says that we are already in possession of a comparatively large number of cases of poisoning by petroleum in the adult, from which we learn that the symptoms, which occur during the intoxication, are, on the one hand, dependent on the manner in which the oil is introduced into the body (whether by inhalation, by absorption through the skin, or taken by the mouth), and on the other hand, on the quality of the petroleum, whether it contained a large or small proportion of the "light" or "heavy" oils. The quantity of oil ingested seems of comparatively little importance. The symptoms when the vapor of petroleum is inhaled, especially if it is greatly concentrated by a lack of fresh air, are similar to those following illuminating and well-gas poisoning; they commence with a certain euphoria, but rapidly lead to unconsciousness, with appearances of cyanosis, vertigo, headache and vomiting. After an energetic rubbing with petroleum, which a man employed for the removal of itch, Lassar observed an extensive edema of the skin, ascites and albuminuria, symptoms which persisted for four months, when death occurred. When petroleum is administered internally, the patients usually present in part gastro-intestinal and in part nervous symptoms, the gravity and number of which seem to depend more on a certain idiosyncrasy and on the quality of the oil taken than on its quantity.

As regards cases of poisoning by petroleum in children, only a very few have been reported. One such case is described by Johannessen. It was a girl two years of age. She died with increasing somnolency and great respiratory difficulty a few hours after having taken an unknown quantity of petroleum. The autopsy disclosed an extensive atelectasis of the lungs, as well as hyperemia of the bronchi, but no pathologico-anatomical changes which could be assumed as the cause of death. Conrad reported the case of a boy not quite two years old, who, after swallowing an unknown quantity of petroleum, was attacked by giddiness, increased

frequency of respiration, lowered temperature, and rapid pulse. This illness ended after a few days in recovery. Conrad gathered together the published cases and found five others of this kind in children of the ages of eleven months to two and a half years, all of them recovered.

Baron gives the following short history of another case: On February 5th of the present year he was called in the afternoon to a child fifteen months old, who, after having, on the day previously, swallowed an unknown quantity of ink, had treated herself on the morning of this day to about 50 grammes (over $1\frac{1}{2}$ ounces) of American petroleum from a damaged night-lamp. The child coughed a great deal after this, and for a long time had a deep dark purple hue. The endeavors of her relatives to provoke vomiting by administering luke-warm milk, warm oil, salt and water and finally soap-suds, were for a long time unsuccessful, but finally a small amount of fluid, smelling strongly of petroleum was vomited. After an enema had been administered, the stools, which had a strong odor of petroleum, were obtained shortly after three o'clock. A quarter after five o'clock the child was in the following condition: The patient is of medium size, strongly built, and furnished with abundant adipose tissue. The color of the skin is markedly cyanotic. Consciousness is absent. The pupils are moderately dilated and react sluggishly to light. No visible changes are found in the mouth and pharynx. The breath has an exceedingly strong odor of petroleum, is stertorous and greatly accelerated (fifty-eight to the minute). Over the bronchi, medium and fine vesicular râles are heard. Pulse 162, irregular as to number of beats and strength. Temperature 38.5 C. in rectum. The treatment consisted of extensive irrigation of the stomach, and only after more than four litres had been used did the odor of the petroleum cease to be detected in the washings. Shortly after the employment of this measure, a warm bath, followed by packing the body in sheets, was administered, and black coffee, camphor with benzoic acid aa 0.025 ($\frac{1}{2}$ grain) were ordered at first every hour and later every two hours. At six o'clock consciousness partially returned, the pulse, however, was yet irregular, 156 per minute. The breath still retained a strong odor of petroleum; respiration had become somewhat slower (forty-five). A stool produced by a clysmma possessed the characteristic odor of petroleum. The child made a rapid recovery, and on February 7th was well.

This case has many points in common with that reported by Conrad, especially the increase and difficulty of respiration. Whether these symptoms are to be explained through a specific action of the petroleum on the lungs, or whether it should be looked upon as due to the well-known action of petroleum on the central nervous system, especially on the centre of respiration, or whether the hyperemia should be explained as a secondary symptom, the reporter could not decide. On the other hand we are taught by this case that the absorption of petroleum by the stomach and the intestine takes place only very slowly. The poison seems to have been more rapidly taken up by the circulation and exhaled by the lungs. Whether various kinds of petroleum would act differently as to their absorptive powers, has not been demonstrated, but it seems likely when we recall the ending of this case and of that reported by Johan-