

have at length succeeded; but it has been pointed out that their results are probably due to spontaneous outbreaks of the disease, having nothing to do with the inoculations.

In any event I cannot accept their experiments as conclusive evidence of the inoculability of cancer until they have been confirmed by independent investigators. And this is the more requisite as numerous previous experiments of the same kind have ended only in failure. With regard to human beings, there is no proof that cancer has ever been communicated from one individual to another.¹⁴ The attempts made by Alibert and others to inoculate themselves and their pupils with the disease were uniformly unsuccessful. There is not a single case on record of a surgeon having acquired cancer during the performance of operations for its removal, notwithstanding the frequency of exposure to infection under such circumstances. Of the thousands of persons habitually engaged in attendance upon the victims of this disease, how few have ever become similarly affected. Notwithstanding that many men have had sexual intercourse with women affected with uterine cancer, there is not a single well-authenticated case on record of cancer of the penis acquired in this way. In short, there is every reason to believe that cancer is not inoculable, neither is there the faintest proof that a virus in any way comparable to that of tubercle syphilis, or other infectious disease, plays any part in its genesis. Here again the hypothetical cancer microbe fails to make good its entity.

I have found very few experiments on record as to the auto-inoculability of cancer in the lower animals. Senn's attempts on a dog failed.¹⁵ In human beings Hahn¹⁶ claims to have succeeded in transplanting several small grafts of cancerous skin from one side of a woman's chest to healthy skin on the other side. This amounts to the artificial production of metastasis. Senn failed in a similar attempt to transplant a fragment of a cutaneous epithelioma of a man's leg into the connective tissue of the part. The chief evidence as to the auto-inoculability of cancer is, however, derived from clinical observation. This, if not quite conclusive, is certainly weighty. In a considerable number of cases it has been observed that when cancerous growths have remained for some time in contact with apparently healthy epithelial surfaces the latter have at length become cancerous, as if by direct implantation. Mr. Cripps¹⁷ has related the case of a woman in St. Bartholomew's Hospital with extensive cancerous ulceration of the left mammary region, who, being unable to put on any dress, had kept her arm—bent at a right angle—in constant contact with the disease for several months. In consequence of this the skin in the vicinity of the elbow became the seat of a cancerous ulcer several inches in diameter. A somewhat similar case had been previously recorded by De Morgan.¹⁸ He says, "My colleague, Mr. Shaw, attended a woman whose pendulous breast—the seat at its most dependent part of ulcerated cancer—rubbed against the skin of the thorax. At the point of contact a circular patch of cancerous ulceration (the size of a florin) took place, the intervening skin between this and the fold of the mamma remaining healthy." Many facts of similar import have been noticed in various other parts of the body.¹⁹ I have myself seen several instances of the kind, especially in the mouth and bladder, in which it appeared to me almost certain that cancerous growths had originated in this way. Several cases have been recorded which go to show that eroded surfaces may become infected through constant contact with the discharge from cancerous ulcers, and many surgeons believe in the traumatic dissemination of the disease through infection of wounds by the escape of "cancer juice" during operations. In all of the foregoing instances the phenomena met with more closely resemble those of tissue grafting than they do those resulting from the inoculation of infectious disease. It may be inferred that the morbid epithelial cells are themselves the infecting agents, and that cancer auto-inoculability is a phenomenon of the same order as cancer metastasis. The evidence here, as before, is against the existence of a specific cancer microbe.

Welbeck-street, W.

¹⁴ For a series of alleged cases to the contrary vide THE LANCET, vol. ii. 1887, pp. 727, 888, 919, 986, 1091, 1145, &c. I regard these simply as highly exceptional coincidences.

¹⁵ Surgical Bacteriology, 1889, p. 267.

¹⁶ Berlin. Klin. Woch., No. 21, 1888, S. 413.

¹⁷ Trans. Path. Soc. Lond., vol. xxxii., 1881, p. 111.

¹⁸ On the Origin of Cancer.

¹⁹ P. Kraske: Ueber die Entstehung sekundärer Krebsgeschwülste durch Impfung. Cent. f. Chir., No. 48, 1884, S. 801.—Klebs: Handb. der Path. Anat., Bd. 1, S. 190.—Bergmann: Berlin Klin. Woch., No. 47, 1887, S. 891.—Kaufmann: Arch. f. Path. Anat., Bd. lxxv., S. 317.

CANCERUM ORIS.

BY E. C. KINGSFORD, L.R.C.P. LOND., M.R.C.S.

IN THE LANCET of May 4th, 1889, in conjunction with Dr. Yates of Bolton, I reported three cases of cancrum oris successfully treated by the local application of corrosive sublimate. A fourth case has come under my notice in which the treatment proved unsuccessful, and I think it but right that this also should be placed on record.

David C—, aged four years, was admitted to the Bolton Infirmary under the care of Mr. G. A. Patrick on Oct. 23rd, 1890, suffering from proptosis of the right eye and intense swelling of the cheek and eyelids on the same side. The history of the case was that the child had been under treatment for three weeks with swelling of the right cheek and ulceration inside the mouth, with very free salivation. The former subsided somewhat after application of poultices, and six or seven days before admission increased again rapidly, the eyelids becoming involved. Teeth were extracted on Oct. 20th and 22nd. The boy was one of a family of three, and, according to his mother's statement, had always enjoyed excellent health; he had not suffered from measles or any debilitating disease, and came from a fairly healthy neighbourhood.

On admission the cheek and eyelids were hard, red, and swollen, and only a very small portion of the cornea, which was hazy, could be seen on separating the latter. Inside the mouth necrosed bone could be felt where the upper molars had been removed, and the breath was extremely fetid. The swelling did not extend down the neck or backwards, nor was there any otorrhoea. The child was not at all depressed, and did not seem to be in pain. Temperature 99°. Chloroform was administered at once and the optic aperture enlarged by snipping through the outer canthus; this allowed of the escape of a small quantity of thin, stinking pus. The eye was prominent, tension greatly increased, and the cornea quite hazy. The alveolar process of the superior maxilla was thoroughly necrosed, and its remains easily removed with dressing forceps. A finger then passed into the antrum came in contact with the eyeball, the floor of the orbit being partly necrosed away. It was now decided, seeing the hopeless appearance of the eye, to remove it, and this having been done, the remainder of the orbital floor was found to be quite bare; the lower orbital rim was then wrenched off with forceps, and a large-sized drainage-tube passed through into and out of the mouth, the two ends being united by a piece of thread. There was very little hæmorrhage during the operation, and the parts were freely dusted with iodoform and dressed with sal-alembroth gauze. The next day the child was quite cheerful and took his milk well, experiencing no difficulty in swallowing. Temperature 102°. Teeth quite clean, the cheek was still very swollen, and the eyelids had not diminished in size.—25th: Child quite lively and talkative, and insists on having his own way. There is a dark gangrenous patch at the outer canthus about the size of a split pea. Temperature 100°.—26th: Gangrene has started in the centre of the lower eyelid; there is copious salivation. The tube was removed, and the orbital cavity well swabbed with perchloride of mercury lotion (1 in 500) containing some glycerine, and lint soaked in the same used as a dressing. The gangrene now extended with frightful rapidity, notwithstanding that the parts were kept constantly soaked with lotion, and that the strength of this was increased to 1 in 250. The patient did not suffer any pain, and permitted the removal of sloughs, swabbing, &c., without resistance. He took his food well, and talked a great deal till Oct. 30th, when he became drowsy and very irritable. Temperature 102°. On Oct. 31st, as the mercury was having no good effect, a lotion of chloride of zinc (eighty grains to the ounce) was used instead. The boy was now more irritable, and refused his food. He died on the evening of Nov. 1st. The whole of the right side of the face had disappeared, the cavity extending from just in front of the ear to beyond the bridge of the nose, and from the upper margin of the orbit to half an inch below the angle of the mouth, the commissure of the lips, however, being left intact; the upper eyelid was represented by a small central tag less than half an inch across. The floor of this cavity opened into the nose and mouth. Most of

the superior maxilla had disappeared, and the inferior was partially exposed.

Remarks.—As this case was not seen till three weeks after the onset of symptoms, it is difficult to determine how it originated—probably as an ulcerative stomatitis, followed by necrosis of the upper jaw, and typical nomatous gangrene. No signs of the latter, however, were apparent till thirty-six hours after the operation. The mercurial treatment had no effect whatever in checking the disease, although in the three other cases in which I have tried it its effect has been most marked within twelve hours. This may be accounted for by the fact that the deeper structures were already thoroughly permeated by the virus, whatever it may be. I doubt if fuming nitric acid could have been adequately used, and am sure that the actual cautery could not in this case, on account of the large surface of bare bone in the original cavity. The case is remarkable in that there had been no previous debilitating disease, and the boy was apparently in very good health. Constitutional symptoms, except rise of temperature, were absent till within thirty-six hours of death, when diarrhoea set in.

The Common, Upper Clapton, N.E.

PREMATURE LABOUR AND DEATH CAUSED BY LACERATION OF THE LIVER.

By W. J. MACKENZIE, M.D.,

SURGEON TO THE CITY OF LONDON LYING-IN HOSPITAL.

THE following case is unique, perhaps, in obstetric annals. However that may be, I venture to think it deserves passing notice in the pages of THE LANCET.

On Oct. 15th I received an ordinary parish visiting order to see a girl, L. P—, aged nineteen, and single. By the merest chance I had seen her in her own house two days before, when I called to visit her younger brother, who was convalescent from rheumatism (not acute). She was then sitting on a chair with her clothes on, and presented no appearance worthy of attention. The tenement consisted of two rooms, dark, unwholesome, and unsavoury, such as must constantly be brought under the notice of London parish doctors. On my arrival on the 15th I found my patient lying huddled up in bed, and averse to answering any questions. Continued cross-examination of her and of the woman who had sent for me revealed that twelve hours before she had miscarried, and that the "offspring" (to use the word in its literal sense) had been put down the watercloset. There was no hæmorrhage, but it was easily made out by external examination that the placenta was still in utero. Vaginal examination proved so exquisitely painful, the patient nearly fainting on the introduction of the finger, that I desisted from any forcible attempts to make an exact diagnosis, as the absence of hæmorrhage seemed to prove that there was no pressing danger. I made certain, however, that the os was closed. No further history could then be ascertained, and so, after prescribing twenty drops of the liquid extract of ergot every three hours, and enjoining on the woman who had sent for me the necessity of letting me know if any urgent symptoms developed, I left. I did not take the temperature, but the pulse was 72, full and normal. Nothing, so far, made me expect a disastrous issue to the case, although the extreme pain and urgent symptoms of syncope on examination puzzled me. On the next morning, the 16th, at 8 A.M. (about eighteen hours after first seeing the patient), I was summoned to her by a message that she was dying. On arrival (about 8.30) I found her almost pulseless. No hæmorrhage had occurred, but I was told she had been delirious and tossing herself about in bed all night. The temperature was normal. She had voided urine, which was acid, non-albuminous, and of sp. gr. 1104. Vaginal examination gave her more intense pain than on the former attempt, and accordingly I desisted from torturing her, though the os could still be felt not patent. In addition to her medicine I ordered her some brandy, and engaged a competent nurse. I saw her again at 12.30 and 3 P.M., when she seemed to have revived, and I was surprised to hear in the evening that she had died at 6 o'clock. There was no history of hæmorrhage in the whole case. Of course the facts were told to the coroner, and a post-mortem examination revealed the cause of death. This was a laceration of the posterior margin of

the liver, which caused an escape of bile into the upper part of the peritoneal cavity. All the other organs were healthy, except the lungs, which showed traces of old inflammation. The uterus was full of placenta, and judging from the condition of the parts I should think that my patient was between five and six months "gone" in the family way.

The history of the case, elicited at the coroner's inquiry, clearly made out the origin of the injury. On the Saturday night before I was sent for, she had been "romping" with her "young man," by whom it was acknowledged she was *enceinte*, and another female friend. The deceased was sitting on a chair, the back of which was firmly placed against the dresser, and the man threw his companion against her with such violence that she felt a sudden shock, and cried out, "Oh! my back!" She then fainted, was taken home, and, recovering at first, experienced no other symptoms till I was sent for. The cause of the lesion is exactly the same as is described in the surgical books. These state that most cases of ruptured liver are met with in railway men, who are subject to a shock between two opposing carriages, and constituting what is called "a buffer accident." The conditions in this case were similar. The victim was sitting on a chair closely applied to the dresser. Between this dresser and the woman who was thrown against her she received a hepatic laceration, as evinced by her cry and syncope, similar to that which railway men suffer from when they are caught between two carriages.

The interval of time between the reception of the injury and the onset of acute symptoms is the point most worthy of notice. The girl was hurt on Saturday night, and miscarried on Tuesday evening; while I saw her on Monday morning I noticed nothing abnormal. I think that on the receipt of injury she must have ruptured some hepatic fibres to a slight degree. Her spirits bore her over the interval; the onset of premature labour, with its consequent muscular activity and exhaustion, tore the divided fibres further asunder, and death ensued in the way I have already described. The post-mortem examination revealed that nothing I could have done would have saved her. The only interesting elements in my attendance were the absence of hæmorrhage and the presence of extreme pain on attempted examination.

Lastly, I may ask what became of the five or six months' fœtus that was thrown down the watercloset? I have been unable to trace it, though I have had one or two cases presenting "typhoid" symptoms in the same block of buildings. The Infectious Diseases Notification Act was only supposed to be a means to an end. That end, among other things, contemplated the bringing of owners of property into and under the reasonable control of their betters—that is, medical men. The very statement of the question just mentioned raises a field of controversy for others than ourselves to thrash out.

Holloway-road, N.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF COMPOUND COMMINUTED FRACTURE OF THE SKULL; TREPHINING; RECOVERY.

By F. W. JOLLYE, M.R.C.S., L.R.C.P. LOND., D.P.H. ENG.

AS several instances of successful brain surgery have been recorded in the columns of THE LANCET lately, the following case may be of interest.

H. H—, aged twenty-two years, was admitted into the Warminster Cottage Hospital at 11.15 A.M. on July 15th, 1889, suffering from a fracture of the left half of the frontal bone, which had been caused half an hour previously by the end of a plank, which he was holding to be cut by a steam saw, suddenly jerking up and hitting him on the forehead. On admission he was totally unconscious, breathing stertorously, with arms and legs rigid and a pulse of 74. Mr. Hinton gave him methylene, and Mr. Willcox kindly assisted me. The wound, which was covered by brain matter and sawdust, was situated an inch above the left orbit, reaching from an inch and a quarter to the left of the median line horizontally outwards for two inches and a quarter. On introducing the finger, several small fragments