flaps and of the whole of the skin and soft tissues (down to the bones) of the dorsum of the foot. Loose tendons may be trimmed off. There is then a dorsal flap D, G, E, F (Fig 5) with a neck uncovered by skin. By bending this neck round over the tibia above the inner malleolus, the dorsal tissues of the foot can be brought over the posterior part of the surface lately ulcerated.

The operation is completed by a procedure like that followed in the first case noticed in this paper. The final

FIG. 6.

result is shown in the diagram, where G, E is the flap from the dorsum, and H, K, L the flap from the heel and sole. The dots indicate the position of the neck of the flap, cut from the dorsal aspect of the foot. In order to economise space, and also to run less risk of being misunderstood, I have endeavoured to be as brief as possible. But to ensure success in "plastic amputations" (a term which, I think, best fits those above described), there are various details to be attended to. Some of these are given at length in THE LANCET for Nov. 28th, 1885. After strict antiseptics, including absolute and scientific cleanliness, the most important point is to preserve the main arteries and nerves of the flaps. It is better not to tie any vessels; no main ones should be cut except at the extremity of the flaps. Hæmorrhage should be prevented during operation by Esmarch's bandage, afterwards by temporary pressure and elevation of the stump nearly to the perpendicular. Pressure should not be too severe or prolonged over the heel itself.

The above procedures may not be of great absolute value, but they enable a stump like a Syme to be got in cases which would otherwise be condemned to amputation at or near the knee, and they have opened up a field of surgery which, if small, is new.

Grosvenor-street, W.

A CASE OF ECTOPIC GESTATION SUCCESSFULLY TREATED BY ABDOMINAL SECTION.

By GEORGE ELDER, M.D.,

SURGEON TO THE SAMARITAN HOSPITAL FOR WOMEN, NOTTINGHAM.

THE case which forms the subject matter of this paper illustrates one variety of misplaced pregnancy—an accident to which all women are liable during the childbearing period of their existence,—and one usually which betrays itself by symptoms so appalling and so destructive to life that not only is its prompt recognition of vital import, but also its bold and skilful surgical treatment.

At the end of last June Dr. Fletcher of Derby asked me to see with him Mrs. C—, aged thirty-three years, and who for some time had been under his care, with a slowly growing abdominal tumour. At this visit and subsequently the following history was elicited. The menstrual function was established when fifteen years of age, and was regular till some months prior to her marriage at twenty, when shortly afterwards her only child was born. The confinement was complicated by adherent placenta, and for some months after the patient suffered from metrorrhagia. The father of the child died when it was four years old, and after three years of widowhood the mother again married, some five years ago. A short time prior to the second marriage the patient was under treatment for over a month at the Cottage Hospital, Yoxall, suffering from pelvic inflammation. Her usually robust health failed somewhat from June, 1888, not so much from any alteration in her general condition as from localised pelvic pains, which materially hindered her in the

discharge of her household duties. Menstruation continued to be normal until January, 1889, since when there have been irregular uterine discharges, accompanied by pseudo-labour pains. The association of morning sickness, occasional faintness, and later abdominal enlargement, induced her at the end of April or beginning of May to consult Dr. Fletcher, when he found a condition as to the true nature of which at that time it was doubtless impossible to give more than a guess, and therefore an expectant line of treatment was advised. From this time till I saw her at the end of June nearly all the period was spent in bed, and every few days the most agonising expulsive pains attacked the patient, followed by bloody vaginal discharges, collapse, and tympanitic distension of the abdomen and tenderness. Large and frequently repeated doses of opiates were absolutely necessary to combat the symptoms; and partly doubtless from this cause, but also largely owing to reflex irritation, the appetite was seriously impaired, and also the power of retaining food upon the stomach. It was at this stage that my visit occurred. The local condition was as follows: A distinct abdominal tumour presented itself, which in the middle line ran from the symphysis pubis to two inches below the umbilicus, and from the latter point on either side to the iliac bones, on the left to an inch posterior to the anterior superior spine, whilst on the right its margin was slightly higher. Except along the upper edge, where there was evidence of adherent bowel, the percussion note was dull. The tumour was fixed; its surface was somewhat irregular, and it gave one pretty much the same sensation as is experienced on manipulating a succulent myoma. Per vaginam the os uteri was found pressed up against the pubic symphysis, and the body lay in front of the tumour, slightly lengthened as to its cavity. Obliterating the posterior vaginal reflexion and encroaching considerably upon the recto-vaginal space was a soft mass, which evidently was the lowermost portion of the swelling. The breasts were flabby, not enlarged, and secreting a thin, clear fluid. The patient's general condition was not good; the recurring hæmorrhage and inflammatory attacks, coupled with systemic disturbance, had told their tale only too plainly in the blanching of the mucous membranes and the loss of flesh; so, to our advice to be removed to the Samaritan Hospital, Nottingham, with a view to relief by operation, she readily assented.

Abdominal section was performed on July 8th, in the presence of Drs. Fletcher and Littlewood of Walsall. On making the usual incision, and cutting through the much thickened and vascular peritoneum, the omentum was discovered firmly adherent to the tumour, and much increased in thickness. Tying this off in sections, a dark-purple-coloured growth was revealed, with the uterus lying upon its lower part. Breaking through its friable investment it was found that the major portion consisted of blood-clots of varying age, and amongst these was found a fetus apparently about three months old and shreds of decidual tissue. The placenta was removed almost entire, with the attached cord, from a pouch of the broad ligament in the right side, its site having been first secured by ligature. After cleaning out the cavity (partly by the hand and partly by irrigation with plain water) the true nature of the case became manifest. A rent had taken place in the broad ligament, so that whilst the roof and the upper part of the anterior wall were invested respectively by intestinal coils and omentum, the sides and lower portion were bounded by a single layer of the broad ligament. Between the cavity and the uterus, with its appendages, this investing layer was interposed. A drainage-tube was inserted, and the parietes brought together in the usual way.

On the evening of the operation very severe uterine pains came on, resulting in the expulsion of a decidual membrane. The bowels were freely moved on the third day; the drainage-tube was taken out on the fifth, and on Aug. 3rd the patient went home well, and has remained so since. After the operation the temperature was practically normal, except on the fourteenth day, when it rose to 100.4°, owing to a little suppuration where the drainage-tube had been.

The history of this case brings out clearly what is almost uniformly observed in ectopic gestation—viz., a more or less prolonged period of sterility, frequently brought about by inflammation of the uterine appendages. The accident of an adherent placenta doubtless was the starting-point of a septic salpingitis, of which the pelvic inflammation which occurred later was merely a recrudescence. When the rupture of the broad ligament happened it is, I think, impossible to

tell. The pregnancy, I imagine, originally extra-, became intra-peritoneal by reason of its increasing growth, thinning, and finally rupturing, the inner layer of the broad ligament; and possibly the date of this coincided with the first of the attacks which the patient had towards the end of April or beginning of May. No other treatment than the surgical offered any hope to the patient, and had the "do-nothing" policy been adopted there cannot be any doubt that a fatal result would have ensued either from hæmorrhagic loss, septic trouble, or intestinal obstruction.

Note—The foetus &c. were shown at the November meeting of the Nottingham Medico-Chirurgical Society. Nottingham.

NOTES ON THE ETIOLOGY OF LEPROSY.

By EDV. KAURIN, M.D.,

DIRECTOR OF THE REKNAES LEPROS HOSPITAL AND CHIEF PHYSICIAN TO THE HOSPITAL FOR THE ROMSDAL DISTRICT, MOLDE, NORWAY.

(Concluded from page 188.)

CASE 14.—Elizabeth E—, peasant's daughter, aged thirty-one, was admitted to the hospital in 1887 with the anæsthetic form of leprosy. The disease has lasted about a year. No history of leprosy can be traced in her parents. For the last four or five years she has lived with a leprosy brother suffering from the tubercular form, whom she and her mother nursed. She has four sisters, all healthy; but they left home at the time when their brother became diseased.

CASE 15.—Lisbet E—, peasant's daughter, aged fifty-seven, was admitted in 1888 with tubercular leprosy of six months' duration. She has lived twenty-three years in the island of Hesö, where much leprosy exists, and which has furnished us with thirty-five cases, and has also served on different farms where there are lepers.

CASE 16.—Karen B—, peasant's wife, aged forty-six, was admitted in 1888 with advanced anæsthetic leprosy of thirteen years' duration. When eight years old she left her birthplace to live in Bolsö. Here there were several lepers. Sixteen years ago she entered service along with a girl who was infected, and they shared the same bed. She also served in places where leprosy prevailed in the neighbouring farms. She was married sixteen years ago, and her husband still remains healthy. He has two healthy children by her.

CASE 17.—Peder L—, peasant, aged fifty-five, was admitted in 1888 with advanced tubercular leprosy of at least five years' duration. Has been married thirty years to a healthy wife; has five children, all healthy. Until the age of twenty he lived with his father on a little farm, which was attached to a larger one. A leper named Törris O—, who came here in 1870, lived on this latter farm, suffering from a severe tubercular ulceration. Peder kept company with this leper both at his home and elsewhere. Moreover, eight years ago he lived during the fishing season at the house of a man who had a leprosy wife. They all three slept in the same bed and ate together.

CASE 18.—Lars E—, aged sixty-one, was admitted in 1888 with very advanced nervous symptoms, extended paralysis, anæsthetic patches, ulcerative spots, &c. No leprosy in the family. Disease began with the tubercular form seventeen years ago. Twenty-five years ago he married a leprosy woman. Her disease, also tubercular, was discovered eighteen years ago, and soon afterwards her husband became a leper. No leprosy exists in the family on his wife's side. Of seven children one is leprosy (tubercular form); he lived at home, and showed signs of leprosy between three and four years after the parents had become diseased. Seven years ago he emigrated to America, and is steadily getting worse.

CASE 19.—John J—, peasant, aged seventy-seven, was admitted in 1885 with tubercular disease of at least seven years' duration, probably much longer. No history in the family of leprosy. The wife (not related) died leprosy after thirty-six years of marriage life. She had been a leper for some time before the husband perceived his own disease. They have had eleven children, out of whom two are leprosy. His wife's brother was also a leper.

CASE 20.—Severin A—, peasant, aged sixty-four, was admitted in 1883 with anæsthetic leprosy of eight years'

duration. He cannot trace his disease to any other cause than to having lived in company with his wife, who became leprosy (anæsthetic) some time before his illness was observed. His wife's mother was also leprosy. His two children, aged thirty and forty years respectively, are healthy.

CASE 21.—Marit P—, peasant's daughter, aged twenty-eight, was admitted in 1875, suffering from the nervous form of leprosy, and readmitted in 1884, with the mixed form of leprosy—that is to say, ulcerative tubercles and infiltrations, as well as large anæsthetic areas, and much muscular atrophy. Altogether the disease has lasted fifteen years. We have positive evidence that her parents are free from leprosy. The father has been married twice, the first time to a leper. Their daughter became leprosy, and was admitted into the Old Reknaes Hospital in 1856, suffering from the nervous form. His second wife was a widow, who was free from leprosy, as was her husband; but their two daughters by this (the first) husband were both leprosy, and were admitted here in 1867, when twenty-seven and eighteen years of age respectively, suffering from tubercular disease. The disease had lasted three and nine years respectively. Marit, the child of the second marriage, was brought up with her two leprosy half-sisters until eleven years of age. In the year 1869, two years after her sisters had been admitted to the Reknaes Hospital, she observed the first signs of her leprosy.

CASE 22.—Inger Y—, a widow aged sixty-five, was admitted in 1888 with advanced anæsthetic leprosy of about fifteen years' duration. There is no history of leprosy in her family. When seventeen years of age she came to Edö, where she acted as servant to several families. When twenty-seven years old she married Andreas T—, who is said to be free from disease. They had a son and three daughters, of whom one daughter, Kristine, became a leper at the age of twenty, but the other children have remained healthy. Andreas had three leprosy sisters and one leprosy brother; the latter lived in Andreas' house for many years. After nineteen years of married life Andreas got drowned, and then his widow had a leprosy woman named Marie K— to live with her for about three years. Marie was admitted in 1875 suffering from the tubercular form of disease. One of the daughters (the above-mentioned Kristine) was living at home, and was, like her mother, quite well. Kristine was in the service of the leprosy woman, and together with her mother nursed Marie K—. Seven years later Kristine was admitted with tubercular ulceration. When the mother had been a widow for three years, she married Ole H—, and moved to his farm in 1872. He was healthy himself, but had a leprosy daughter, who stayed with them until she was admitted in 1873 with tubercular leprosy. This second marriage bore no fruit.

I now proceed to treat of the second group of cases in which leprosy can be traced along the direct family line, and then to the third group, in which the descent is doubtful, but which may be used by some physicians in support of the hereditary theory, or of "latency" in the family; but for my part I am inclined to believe that even in these latter instances contagion is the real cause.

CASE 1.—Edvard H—, sailor, aged twenty-six, was admitted in 1882 with "nervous" leprosy, accompanied by necrosis of the bones of the left foot. The grandfather, grandmother, and parents were healthy; but his uncle on the mother's side, at whose house he lived for two years before he became attacked, was a leper. He confesses to having had the disease only two years, but from other witnesses the time appears to have been at least eight years.

CASE 2.—Kristine A—, peasant's wife, aged twenty, was admitted in 1882 with tubercular disease of three years' duration. She had then been married three years. Her husband and child both healthy. Her four brothers and sisters are all healthy, as are her parents; but one brother and three of the sisters of her father are lepers. For a year and a half she had been in the service of Marie K—, a leprosy woman, who was admitted here with ulcerative tubercular leprosy in 1885. She states that her disease began after her first child was born, seven years after she had left Marie K—'s service.

CASE 3.—Iver L—, aged sixteen, admitted in 1884 with tubercular leprosy of five years and a half's duration. The parents were healthy, as are his seven brothers and sisters. His mother's brother, in whose house he had lived