tion, pure and simple, has become obsolete, as it is fraught with danger and ineffectual, being followed by recurrence in over 50 per cent. of the cases.¹ Arékion² found in twenty-five cases treated in this manner only seven recoveries. I have found, as have the majority of surgeons, that excision of the cyst is the ideal method of procedure, whenever practicable. It is not a particularly difficult procedure, even when, as in cases of multilocular cysts or as in my own case, resection of a portion of the intestine is necessary on account of interference with the blood-supply of the bowel. Occasionally, the cysts are so large or the adhesions so numerous that both enucleation and resection would be impossible, and one must resort to incision and drainage.

CLASSIFICATION

These cystic tumors of the mesentery may be classified either according to their origin or their contents. The etiology of mesenteric cysts is a much-disputed question. Moynihan,³ Porter⁴ and Braquehaye⁵ believe that they have a multiple origin, while Dowd,⁶ Proust⁷ and Niosi⁸ assert that the majority of these cysts are embryonic in origin. Dowd supports this theory by the following statement in regard to the anatomy and development of certain of the genito-urinary organs:

It is altogether within the bounds of probability that such a separation should from time to time take place from the Wolffian body or the germinal epithelium at an early time in embryonic life; and, if such portions are separated, it is not strange that they should be carried into the mesentery, mesocolon or mesorectum in the course of their development, and there form cysts.

We find the following classification given by him: (1) Embryonic; (2) hydatid; (3) cystic malignant disease. According to his theory chylous and dermoid cysts probably originate as embryonic ovarian sequestrations, while hydatid cysts form a class by themselves, being caused by *Taenia echinococcus*. Sanguineous cysts, he believes, are preformed cysts into which hemorrhage has taken place. Proust⁷ also classifies these lesions under three headings: Embryonic, including cysts of intestinal origin from "rests" of the Wolffian body and dermoid cysts; serous cysts, and the lymphatic including chylous cysts.

I prefer, however, to consider these lesions as having a more varied origin and classified according to their nature, as Moynihan has done: (1) Serous cysts, unilocular or multilocular, which contain a pale, clear, straw-colored fluid, and arise either from a lymphatic dilatation or from hemorrhages between the layers of the mesentery; (2) chylous cysts, probably the most numerous, either unilocular or multilocular, containing a milky white fluid, and due to a dilatation of some of the lacteals or chyloferous vessels, or possibly to an effusion of chyle into a preexisting cyst, though Dowd classifies them as embryonic in origin; (3) hydatid cysts, which compose a class by themselves and are due to the *Taenia echinococcus*; (4) dermoid cysts, undoubtedly embryonic in origin, most likely ovarian, since they are much commoner in women than in men (twenty out

of thirty-one), and lastly the category to which my case belongs, namely (5), the sanguineous cyst.

The proportion of this variety of cystic tumors is exceedingly variable. Arékion,⁹ in 1891, found one sanguineous cyst in eighty-one cysts of the mesentery; in 1891, Bianchi¹⁰ reported nine in 95 cases; and in 1892 Braquehaye⁵ found twenty-five out of 104 cases of cysts of the mesentery. In 1900, Roques¹¹ collected reports of nineteen cases, and to these Timbal¹² added thirty. The latter author found that these lesions were a little more common in men than in women, and that they were more likely to develop during the earlier years. Both of these facts probably have some connection with the traumatic origin of most of these cysts. This variety does not really comprise a distinct class by itself, but rather is a variation of other forms, whose nature and development have been modified through accident. They are usually preformed cysts into which hemorrhage has taken place. In fact, all authors are agreed that traumatism plays a very important rôle in the formation and development of sanguineous cysts. It sometimes changes former serous cysts into sanguineous ones, and sometimes causes a rupture of one of the mesenteric vessels, resulting in a hemorrhage which afterward develops into a cyst in the folds of the mesentery. In the latter instance we have really not a true sanguineous cyst, but rather a traumatic hematoma. The forty-nine cases collected by Timbal¹² may be grouped as follows.

Mesentery	{ Pure sanguineous cysts.....	26
	{ Hematomata	9
Great omentum.....		2
Lesser omentum.....		1
Posterior cavity of the omentum.....		3
Transverse mesocolon.....		6
Descending mesocolon.....		1
Large ligaments.....		1

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TUBERCULOSIS ACQUIRED THROUGH RITUAL CIRCUMCISION

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Tuberculosis by direct wound inoculation while not a frequent method of contracting the disease has yet occurred often enough to demonstrate the fact that this is a real danger. In 1887 Willy Meyer collected reports of a number of such instances and added a report of a case of his own of tuberculosis acquired through ritual circumcision. Since that time many additional observations on this subject have been published but only two, so far as I am aware—one by Ware and one by Sara Welt-Kakels—in this country. From inquiries, however, I am led to the opinion that many cases occur which do not find their way into print.

REPORT OF CASE

The report herewith presented is of more than ordinary interest by reason of the virulence of the infection as shown by the wide-spread lesions and the fact that

1. Deaver: Ann. Surg., May, 1909.
2. Arékion: Étude sur les kystes du mésentère, Thèse de Paris, 1890-91.
3. Moynihan. Ann. Surg., xxvi, 2, p. 1.
4. Porter: Ann. Surg., xliii, 1, p. 380.
5. Braquehaye: Arch. gén. de méd., November, 1892.
6. Dowd: Ann. Surg., 1900, xxxii, 2, p. 515.
7. Proust: Rev. de gynéc., 1912, xix, No. 3.
8. Niosi: Virchow's Arch. f. path. Anat., exc, No. 2, p. 217.

9. Arékion: Étude sur les kystes du mésentère, Thèse de Paris, 1890-91.
10. Bianchi: Riforma med., November, 1891.
11. Roques: Kystes sanguins du mésentère, Thèse de Lyon, 1900, No. 105.
12. Timbal: Rev. de chir., 1910, xii, 50.

the death occurred at an earlier age than in any case of which I have found a record.

History.—On February 24 of this year there was admitted to the Babies' Hospital an infant 3 months of age with an extensive ulceration of the penis. The child was one of seven, four of whom were dead from various acute diseases. The parents were healthy as were the other living children. There was no evidence of syphilis or tuberculosis in the family. The infant at birth was a large child, reported to have weighed 11 pounds, and had been breast-fed up to the date of admission. When eight days old the operation of ritual circumcision had been performed, the blood being sucked in the usual manner. The wound did not heal properly and at the end of a week suppuration was present and ulceration followed which began in the prepuce and gradually extended, up to the time the child was brought to the hospital. About two weeks after operation swellings of lymph-nodes in the groin were observed and these also had steadily increased in size although showing no tendency to suppuration. The digestion had been good and the nutrition well preserved until the last three weeks, during which there had been apparently a steady loss in weight, refusal of food, and slight fever and cough. There was also a discharge from one ear and from the nose. Four or five days previously a scanty maculovesicular eruption had been observed over the trunk and extremities.

Examination.—A well-nourished, normally developed infant was found, weighing 11½ pounds, who did not appear acutely

Tuberculous ulceration following circumcision.

ill. Scattered over the body there were fifteen or twenty lesions which closely resembled those of varicella. Two or three were found on the scalp and several over the neck, shoulders, trunk and thighs. None were seen on the hands or feet and none on the mucous membranes. They were all very similar in character, from 3 to 4 mm. in diameter, vesicular at the periphery and crusted at the center, giving a somewhat umbilicated appearance. A very narrow zone of redness surrounded the lesions. Apparently there was no itching as they had not been injured by scratching. Elsewhere the skin, including that of palms and soles, was quite normal. Many riles were present over both lungs, but there were no signs of consolidation present. The heart was normal. The abdomen was moderately distended. The spleen was much enlarged, reaching fully two inches below the costal margin. The liver also was markedly enlarged, its lower border being three inches below the costal margin. In the inguinal region, both sides, was a chain of large nodular swellings about the size of the last phalanx of the little finger. No signs of suppuration were present. The penis showed complete destruction of the skin by ulceration quite to the abdominal wall and to the base of the scrotum (see Fig. 1). It was one granulating surface from which pus was freely discharging. At the meatus was quite a deep ulceration producing an appearance resembling a slight hypospadias. The tuberculin skin test gave a strongly positive reaction. Tubercle bacilli were found in the discharge from the penis, in the sputum and in scrapings from the

cutaneous lesions described. The bacilli from the ulcers of the penis were carefully differentiated from smegma bacilli.

Course of Disease.—The child lived sixteen days after admission. During this period there was a constant temperature usually varying between 99 and 101 F. but occasionally going to 102 or 103. There was progressive weakness, steadily increasing cough and riles throughout the chest. The glandular swellings in the groin became larger but did not soften. The other external lymph-nodes were not enlarged. The blood examination at date of admission showed a leukocytosis of 16,000; polymorphonuclears 85 per cent.; lymphocytes 14 per cent.; hemoglobin 65 per cent. Just before death the leukocytes increased to 24,000 and the polymorphonuclears to 92 per cent. No cerebral symptoms were present, but there was considerable restlessness and lumbar puncture was made two days before death. A clear fluid under normal pressure was obtained which gave a faint globulin reaction and showed an excess of cells—twenty to the cubic millimeter. The skin lesions present on admission dried up slightly during the period of observation but no new ones appeared. Death occurred from exhaustion.

Necropsy.—Body well nourished, the lesions on the skin still showing.

Brain: Three or four miliary tubercles were seen over the base and a few over the convexity, but the ventricles were not distended and no evidences of meningitis were present.

Lungs: The pleura was not adherent; both lungs were everywhere studded with miliary tubercles and small tuberculous nodules. Considerable bronchitis but very little pneumonia was present. The lungs looked much as if they had been infected by a syringe of tubercle bacilli injected into the trachea. No part of the lungs had escaped. The bronchial and mediastinal lymph-nodes were caseous but not very large, none being over 1¼ cm. in diameter, and none showed softening.

Heart: A small yellow tubercle was seen on the coronary artery about its center. A tuberculous nodule, 2 mm. in diameter, was found in the wall of the right ventricle, and another smaller one in the wall of the right auricle near the entrance of the superior vena cava. This involved the pericardium, endocardium and cardiac muscle and was cheesy.

Abdomen: The parietal peritoneum was studded with miliary tubercles and tuberculous nodules, especially over the diaphragm. The spleen measured 8 by 4.5 cm., and on the surface and in its substance showed many tuberculous nodules of large and small size. The liver was large, fatty and showed many tubercles on its surface and a few in its substance. The kidneys each contained small caseous tuberculous nodules in moderate numbers, chiefly in the cortex. Both adrenals contained tuberculous nodules, one of which was caseous. Two similar ones were found in the pancreas. The stomach and duodenum were normal, but throughout the rest of the small intestine were great numbers of tuberculous ulcers some of which extended quite to the peritoneal coat. There were large tuberculous ulcers in the cecum and throughout the colon, even in the rectum.

The mesenteric lymph-nodes were greatly enlarged and caseous. The largest inguinal lymph-nodes were 3 cm. in length and 1.5 cm. in breadth. They were caseous but not softened. Extending upward from these was a chain of large caseous retroperitoneal lymph-nodes which followed the iliac arteries and then the aorta. One of the iliac arteries contained a cheesy lymph-node in its adventitia. The tuberculous character of this lesion was confirmed by microscopic examination. Three tubercles were seen on the mucous membrane of the bladder near its base. Both middle ears contained pus.

An opportunity was given to examine the man who had performed the operation. He was a pale, thin, almost emaciated individual, who looked decidedly tuberculous although no physical signs of disease in his lungs could be detected. In his sputum two acid-fast bacilli were found which looked like tubercle bacilli.

This case seems complete and the evidence of infection through the circumcision wound, conclusive. A

healthy child, born of healthy parents, breast-fed, developed local symptoms of infection within a few days after the operation and these persisted, being followed after a few weeks by symptoms of general infection which continued until death. The lesions found at necropsy point strongly to a spreading of the infection through the lymphatic system beginning from the wound, and afterward to a general blood infection. At death, which occurred when the child was 3½ months old, practically every organ in the body was involved. Specially worthy of note in the lesions are the tuberculous nodules of the iliac artery and of the myocardium; the latter lesion I have seen but once before; also the tuberculides of the skin, a lesion which I believe is often overlooked; it has been observed at the hospital in two other cases during the present season, both patients being young infants.

A search through medical literature brings to light a considerable number of examples of tuberculosis spread by means of ritual circumcision. In all I have collected, with the assistance of Doctors Alan Brown and Stafford McLean, references or reports more or less detailed of forty other cases. These are of sufficient interest to make a brief summary desirable.

SUMMARY OF LITERATURE

LINDMANN'S¹ CASES: Two cases. The operation was done in the usual manner, the operator sucking the wound; one child died and the other recovered after a long illness. In both cases tuberculous ulceration occurred followed by caseous degeneration of the inguinal lymph-nodes. Ages of children are not given; the operator died two months after performing the operation, presumably of tuberculosis.

LEHMANN'S² CASES: Ten children with almost identical symptoms infected by the same operator. The operator subsequently died of tuberculosis. The wound was sucked in the usual manner. The early signs were similar—irregular, grayish preputial ulcers which gradually extended. After two or three weeks there was swelling of the inguinal lymph-nodes which in most cases suppurated. No microscopic examinations were made, the diagnosis resting on the clinical symptoms.

ELSENBERG'S³ CASES: One case in full. The first diagnosis made was syphilis. Subsequently the patient developed suppuration of the inguinal lymph-nodes and afterward erysipelas. Tubercle bacilli were found in the sputum of the operator. The author reports that he has seen three similar cases but gives no details.

EVE'S⁴ CASES: Infant 5 months old, admitted with suppurative inguinal adenitis (double) and preputial ulcers. Ritual circumcision had been done on eighth day. A few weeks afterward inguinal glandular swellings were noticed, which steadily increased. Abscesses were opened and curetted. Sinuses followed which were still present at 8 months. At 10 months the child was well. Pus from inguinal lymph-nodes injected into guinea-pigs produced tuberculosis. Operator died from tuberculosis seven and a half months after the circumcision. He did not suck the wound in this case but merely ejected some wine from his mouth over it. Author refers to another similar case but gives no details.

DEBROVITZ'S⁵ CASES: Infant 7 months old had multiple ulcers of the prepuce with extensive ulceration at the meatus. Inguinal lymph-nodes were much swollen. Subsequently they broke down and were incised. At 12 months of age wounds healed; patient was regarded as well. Operator was examined and found to be tuberculous; he rinsed his mouth with red wine before sucking the wound. The writer refers to three other cases, all from the same operator, but gives no details.

GESCHEIT'S⁶ CASES: Five cases with similar clinical symptoms. Details of one case given. Patient's age 8 months. Circumcision on the eighth day. Wound healed in ten days except a dorsal preputial ulcer. There was edema of the parts. Inguinal lymph-nodes swelled to the size of pigeon's egg. Syphilis was suspected. Antisyphilitic treatment was used without success. All five cases occurred in healthy families. Three children died within six months of meningitis and enteritis; two at 7 and 8 months were living at the time of the report. All showed evidences of a primary local lesion. The operator was "thoroughly tuberculous" and had been long ill. Although he had done many previous operations these were the first infants known to have been infected. The author does not state how the diagnosis was made in his cases.

WILLY MEYER'S⁷ CASE: Infant 12 months old. Family healthy. Only child. Circumcised on eighth day by an old man. At 4 weeks inguinal swellings were noticed and syphilis was suspected. Mercurial treatment was begun. At 4 months ulcer was noticed on the frenum. Moderate inguinal adenitis was present. Syphilis was still regarded as the diagnosis and treatment continued. There was no improvement under syphilitic treatment. Inguinal lymph-nodes subsequently broke down and were curetted. Tubercle bacilli in great numbers were found in the pus. Subsequent history not given.

HOFMOKL'S⁸ CASE: Infant, 8 months old. Family healthy. The early symptoms identical with those in the other cases reported. Syphilis suspected and for a long time antisyphilitic treatment continued without success. Inguinal lymph-nodes subsequently extirpated; found caseous. Diagnosis established by microscopic examination.

KOLIZEW'S⁹ CASES: Seven cases of tuberculosis of the penis are reported following circumcision by a rabbi suffering from tuberculosis. Two patients died; two made partial recovery; two were lost sight of, and one recovered. In only one of the families was there tuberculosis. Arluck and Winocouroff state that this report led to a movement of far-reaching social effect for the reformation of the performance of ritual circumcision.

WARE'S¹⁰ CASE: Infant, 3 months old. Parents healthy. Ritual circumcision done at one week. Two weeks later inflammation of the prepuce. Swelling of inguinal lymph-nodes, both sides, first seen at 4 weeks. Preputial ulceration with moderate secretion also present. Syphilis suspected. Antisyphilitic treatment instituted but without benefit. Lymph-nodes broke down and were curetted. Tubercle bacilli not found, but the microscopic examination of the lymph-nodes showed giant cells and tuberculosis was diagnosed. Case passed from observation.

WELT-KAKELS'S¹¹ CASE: Infant, 6 months old. Healthy parents. Circumcision the ninth day by man presumably tuberculous. Wound sucked. Inguinal adenitis observed at the end of four weeks followed by suppuration. Tubercle bacilli found in the pus. Von Pirquet test positive. Lymph-nodes removed.

At 4 years of age the child was reported by the writer to be living, but, from physical appearance, was regarded as still suffering from tuberculosis.

J. M. T. FINNEY'S¹² CASE: Infant came under observation "some months after the circumcision" with local ulceration and enlargement of inguinal lymph-nodes. Tubercle bacilli in large numbers were obtained from the scrapings. Ulcerated areas were curetted. Inguinal lymph-nodes were excised, both sides. Bacilli were found also in the lymph-nodes. Subsequently tuberculosis of one knee developed. The patient was under observation many years and is reported never to have had any other evidences of tuberculosis. Investigation by the family revealed the fact that "several other children,"

1. Lindmann: Deutsch. med. Wehnschr., 1883, No. 30, p. 442.
2. Lehmann: Deutsch. med. Wehnschr., 1886, Nos. 9 and 13, pp. 144 and 218.
3. Elsenberg: Berl. klin. Wehnschr., 1886, No. 35, p. 581.
4. Eve: Lancet, London, Jan. 28, 1888.
5. Debrovitz: Pest. med.-chir. Presse, 1899, No. 23, p. 529.

6. Geschelt: Internat. klin. Rundschau, 1889, No. 23, p. 904.
7. Meyer: New York med. Presse, June, 1887.
8. Hofmokl: Wien. med. Presse, 1886, Nos. 22 and 23, pp. 714 and 750.
9. Kolizew: Ztschr. d. russ. Gesellsch. d. Volksgesundheitsfürsorge, 1891; abstr. in Monatsh. f. prakt. Dermat., 1893, xvi, 491.
10. Ware, M. W.: New York Med. Jour., Feb. 26, 1898.
11. Welt-Kakels, Sara: Arch. Pediat., 1909, p. 400.
12. Unpublished report.

all of whom had been circumcised by the same man, had been similarly infected. He is stated to have been definitely tuberculous. The parents reported that he spat on a cloth which was used as a dressing for the wound after operation.

ARLUCK AND WINOCOUROFF'S¹³ CASES: Infant of 5½ months. Parents healthy. Circumcision on eighth day. Wound was sucked by one of the guests who was tuberculous. Inflammatory signs developed in the course of the next two weeks, followed by local ulceration, swelling and breaking down of inguinal lymph-nodes. The child wasted with signs of generalized tuberculosis. The entire penis ulcerated quite to the scrotum. There was great enlargement of inguinal lymph-nodes. Wassermann was negative; also the von Pirquet test, the latter thought to be due to the wide-spread infection. One tubercle bacillus was found in scrapings from the preputial ulcer. Death occurred four days later. Necropsy showed general tuberculosis involving lungs, intestines, spleen, mesenteric and inguinal lymph-nodes. The infection was believed to be through the lymphatic system.

Of the forty-one patients, including my own, sixteen are known to have died; seven are reported as having partially recovered or being serofulvous; in twelve the final results were not given; and only six are stated in the histories to have recovered. The youngest fatal case is that of the patient whose history I have reported. In several instances death has occurred as late as 11 months from tuberculous meningitis. The usual cause of death has been general tuberculosis. In many of the reports several children have been infected by a single operator. Thus, in Lehmann's cases, all ten of the children were thus infected; Gescheit reports four infants infected by the same operator; Lindmann, two patients; Debrovitz, four patients. In nearly all of the reports the fact is stated that the families were free from tuberculosis. As a rule the earliest symptoms of infection have been observed in about a week after the operation. The wound does not heal, but suppuration occurs and ulceration soon follows. The early ulcer may be anywhere on the prepuce but is often on the frenum. It may remain as a localized process or be general. At the end of a second or third week inguinal adenitis develops. In a very considerable number of cases it is reported that the lymph-nodes broke down and abscess formed, usually in two or three months after the initial infection. The cases in which early suppuration of the inguinal lymph-nodes took place and which were operated on, either by removal or curetting, were among those in which the results were the best. The symptoms of a wide-spread general infection rarely occurred earlier than the third or fourth month.

The diagnosis has been made in many of the cases by the clinical symptoms and history alone. Some of these were reported before systematic search for the tubercle bacillus in wounds was practiced or modern tuberculin tests were employed. In nearly all of the later cases reported, the diagnosis has been established by the discovery of the bacilli in the inguinal abscesses, sometimes from the preputial ulcers. In the latter situation they must be carefully differentiated from smegma bacilli. That the infection spreads through the lymphatic system seems certain and early removal of the inguinal lymph-nodes would therefore appear to be the most important measure to be employed in checking the extension of the infection. To be successful this must of course be done early.

In a very large proportion of the cases reported the first diagnosis made was syphilis, and the patients were treated for weeks and months by antisyphilitic meas-

ures without benefit and with loss of valuable time. It is my own belief that syphilis is less frequently acquired in this manner than is tuberculosis and that the latter disease should be first suspected. With the modern means of diagnosis in tuberculosis the early recognition of these cases ought not to be difficult. While the number of reported instances of tuberculosis acquired through circumcision is considerable there must be a very much larger number that have never found their way into literature. It is certain also that syphilis has been spread in this manner. These facts lead me to emphasize the statement made by the late Professor Maas, the German surgeon, that "it is the duty of the physician to raise his protest against the performance of ritualistic circumcision in every case."

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PEMPHIGUS FOLIACEUS *

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Pemphigus foliaceus was first described by Cazenave in 1844. It is a rare skin disease occurring about once in five thousand cases. Radeliff Crocker, with his almost unlimited experience up to the year 1903, encountered it only six times—in five women and one man. It is one of the rare forms of dermatitis that has a universal distribution, with the formation of flaccid bullae which quickly rupture and discharge their contents, leaving an inflamed, excoriated and fissured surface.

The disease may begin as a pemphigus foliaceus or from a chronic pemphigus vulgaris, the bullae changing their character. It may develop from a dermatitis herpetiformis, according to Hallopeau, or from a general dermatitis exfoliativa.

The bullae are flaccid and at times do not raise the epidermis perceptibly; if the amount of fluid is greater, it extends the lower part of the bullae. The contents are purulent, almost from the beginning. The mucous membranes may be involved. There is a feeling of stiffness and tension in the skin where the epidermis has dried. There is not much itching or burning as a rule, but at times it is severe and paroxysmal, owing to the exposure of the corium to the air.

After the disease has lasted for a time, there may be fever, either intermittent or continuous, or the temperature may remain normal.

The etiology of this disease is still in doubt; chills may be a causative factor, or violent emotions, according to Hallopeau.

In making a diagnosis we must differentiate from universal eczema, pityriasis rubra, lichen acuminatus universalis, eczema rubrum and pemphigus vegetans.

The disease may be years in duration, but, sooner or later, the patient succumbs.

Two cases which have come under my observation since March 5, 1912, may be of interest to the general practitioner, if not to the dermatologist.

CASE 1.—Mrs. M., aged 56, a native of Denmark, who had come to America the previous October to visit a married daughter living in northern Iowa, was admitted to the University Hospital, March 5, 1912. Her father died at the age of 61; mother died aged 36 or 38; one brother and one sister are living and well; three brothers are dead, cause unknown.

* Read in the Section on Dermatology of the American Medical Association, at the Sixty-Fourth Annual Session, held at Minneapolis, June, 1913.

13. Arluck and Winocouroff: Beitr. f. Tuberk., 1912, xxii, 341.