

lating in the vitreous. Patches of complete atrophy appear, bounded by a ring of black pigment; the entire surface in this ring is white or bluish-white and glistening, and we cannot see any trace of the choroidal vessels or pigment, yet the retinal vessels go across without interruption. The appearance of the fundus, between the choroidal spots, is usually normal. When the inner layers of the retina become affected the case is always more or less serious and a loss of sight may take place either from atrophy of the disc or from detachment of the retina.

Iritis, interstitial keratitis and scleritis may make their appearance during the course of the disease. Liquefaction of the vitreous may take place with partial or complete dislocation of the lens. The occurrence of a group of yellowish-white flecks near the macula and of dust-like opacities of the vitreous, with change in the walls of the choroidal and retinal vessels, is nearly always characteristic of syphilis.

Syphilitic chorio-retinitis is always characterized at first by fine dust-like vitreous opacities and increased redness of the disc, which latter is surrounded by a halo of grayish discoloration. There is an absence of the patchy condition characteristic of choroidal inflammation alone. This form is frequently preceded by iritis. Night blindness is usually a marked feature. The field of vision rarely shows any marked diminution. In the early stages the diagnosis is quite difficult; there is a smoky appearance of the details of the fundus, however, which is characteristic. The vitreous opacities, increased redness of the disc and opacities of the surrounding retina, are frequently the only diagnostic signs.

Later, as the disease progresses, there is often found overfullness of the retinal veins, with a contraction of the calibers of the arteries and paleness of the disc.

POLYCYTHEMIA.

J. F. ALDRICH, M.D. AND LE ROY CRUMMER, M.D.

SHENANDOAH, IOWA.

OMAHA.

The recent exhaustive articles¹ on this subject have changed our plans in considering the condition in detail and referring to the previous work which has been done on this subject, but cases are still so rare that we think it expedient to report this one in considerable detail. This case seems of especial interest in that while it has the entire triad of symptoms completely developed, it differs in some important essentials from the cases previously reported.

Patient.—Mrs. J. M. D., aged 53, first seen by Dr. Aldrich Jan. 11, 1906, complained of considerable dyspnea on exertion. She had also noticed that she had an immense growth in the left abdomen.

Family History.—This was negative. The father was living at the age of 86, and was in reasonably good health. The mother died at 50, from a "lingering consumption." The patient had waited on her mother constantly for three months prior to her death, but developed no symptoms following this exposure. She has two brothers living, aged 50 and 55 years respectively, and both in good health. Four sisters died in early infancy, the causes of their deaths being unknown to the patient. One brother died of a wound received in the Civil War when but 20 years old.

Personal History.—When a child the patient had eczema on the scalp and along the shins, and at about the same time, had a severe attack of ringworm. She also had measles, scarlet fever, chickenpox and mumps during childhood. She never had any of the other diseases, nor has she ever been seriously sick

at any time since puberty. There was no history of typhoid or malaria, and she has never had symptoms which would indicate a tuberculous infection. Menstruation began at 14 and terminated in a normal climacteric at the age of 50. Before marriage she had dysmenorrhea, but was much better after marriage, and has considered herself normal in that respect ever since. She has borne six children, the latest eleven years ago.

History of Present Condition.—For eight years she noticed a redness of the face so striking at times that even the school children noticed it and would run past her house exclaiming: "Look out for the red Indian woman." During this entire period she had a feeling of fullness of the head and dizziness at times. This still continues, but occurs only at comparatively long intervals. Three years ago she first noticed a tumor in the abdomen, which enlarged rapidly, and at the end of the first year was as large as a coconut. This tumor grew slowly, but continuously, and she did not notice at any time a decrease in size. She never had any form of hemorrhage.

Symptoms.—The patient complained of extreme fatigue, a feeling of weight and dragging in the abdomen, and pressure over the bladder. She suffered somewhat from nausea, a slight distress after eating, and occasional attacks of diarrhea. She never had fever, but perspired easily. There had never been much loss of weight.

Present Condition.—Jan. 11, 1906. Patient was in fair flesh, had no difficulty in walking, and showed no trace of fatigue after rather a hard trip. The color of the face and hands was striking. The exposed skin had a dusky red color, and on closer examination, enlarged veins were seen in fine network throughout the skin. The conjunctiva presented the same appearance. The teeth and gums were normal; there was no tonsillar enlargement. The cervical glands, as well as those in other regions, were normal. The lungs were normal, save for a slight emphysema. The heart was normal in size and sounds, and there was no dulness of the mediastinum. Examination of the abdomen showed no ascites, no enlarged veins, and the liver not perceptibly enlarged. The entire left half of the abdomen was filled with a heavy tumor, which came out from under the costal border at the seventh cartilage, extending down to one inch to the right of the umbilicus. One inch below the umbilicus it turned and ran almost horizontally across to the antero superior spine of the ilium, and thence behind the crest of the ilium. There were three typical notches of the median edge, which, however, were very blunt. Careful palpation gave an impression that this tumor was thicker in the anteroposterior diameter than is usual with splenic enlargements. The length of the anteroposterior diameter from the costal border to the lowest point in the abdomen was seven and one-half inches. The tumor was seven inches from the extreme right edge to the point where it disappeared behind the crest of the ilium. The skin was everywhere mottled, but there were no enlarged veins except on the face and hands. There was no edema, but some tenderness on percussion over the sternum, tibia and other long bones. Urinary examination gave normal findings.

Blood Examination (Crummer).—

Red blood cells (Thoma Zeiss).....	7,700,000
White blood cells.....	4,700
Hemoglobin (F. M.).....	120 per cent.
Index.....	approx. 4/3

Smears stained by the Ehrlich's nitrophile and eosin-methylene blue method showed considerable variation in the size and contour of the red blood cells. There were many microcytes and a few pale-staining macrocytes. A few cells show slight poikilocytosis, and in almost every field polychromatosis could be recognized. Nucleated red cells were found in considerable numbers. While counting 200 white cells, 24 nucleated red blood cells were seen, which equals 6,600 nucleated red blood cells per c.c.m. Five or six were typical normoblasts, while the others showed many characteristics of the megaloblastic type of cell.

The differential white cell count showed:

Polymorphonuclears	72.5 per cent.
Eosinophiles	4.0 per cent.
Large lymphocytes.....	8.0 per cent.
Small lymphocytes.....	11.0 per cent.
Myelocytes	4.5 per cent.

1. Englebach and Brown: THE JOUR. A. M. A., Oct. 20, 1906. This article contains a complete biography.

Treatment.—Acting on the advice of Turk, the patient was placed on Fowler's solution, which, however, she did not stand very well, and a pill, containing arsenous oxid, .001 gm.; pepper, .020 gm.; and licorice, .050 gm., was substituted with the same bad results. The tumor mass was regularly given fifteen minutes' exposure to the Roentgen ray, and an abdominal support was ordered.

Subsequent History.—On February 11, the patient again presented herself for examination, feeling much better, and stronger in every way; the symptoms had practically disappeared. She had had eleven Roentgen-ray treatments. The tumor was smaller in size; its transverse diameter being four and one-half inches, while its longitudinal diameter was five and one-half inches. The anteroposterior diameter had diminished, and it had assumed more nearly the shape of the ordinary splenic tumor. On examination the urine was found normal in every particular. The blood pressure by the Riva Rocco (wide cuff) apparatus was 132 mm.

Blood examination on this date:

Red blood cells.....	6,048,000
White blood cells.....	5,500
Hemoglobin.....	90 per cent.
Index.....	approx. 3/4

The microscopic findings were the same as at previous examination.

Jan. 5, 1907: It has been impossible to make further blood examination of the patient, but a report was just received stating that the patient continued well during the spring and summer, was able to work, and was entirely relieved of pain and distress in the abdomen. She had an attack of jaundice during August and the early part of September, which gradually cleared up, and since that time she has been less cyanotic. In September the spleen began to enlarge again, but on taking Fowler's solution it gradually diminished in size and is now less than half as large as it was at the time of first observation. Now it does not extend to the median line or as low as the umbilicus. Subjectively, she feels better and stronger in every way.

This case presents the usual features of polycythemia in its characteristic form, as in cases hitherto reported. It is furthermore one of the few reported cases in which improvement has been definitely noted. Concerning the theories of pathogenesis applied to this case, we have, it is true, a history of exposure to tuberculosis before the disease began, which might support the theory of Rendu and Vidal,² as to the tuberculous origin of this trouble, but careful examination showed absolutely no other signs of a tuberculous process, and it would hardly be fair to assume that this case was also one of localized splenic tuberculosis, particularly as the blood examination showed more definitely than in any of the hitherto published cases, the signs of an irritative lesion of the bone marrow (megaloblasts and myelocytes), thus in a great measure substantiating Turk's³ assumption that polycythemia is in reality a primary disease of the red bone marrow.

2. "Splénomégalie tuberculeuse sans leucémie avec hyperglobulie et cyanose." Bull. et mem. de la société méd. des hôp., 1899, 111, p. 528.

3. Wiener klin. Wochschr., 1904, Nos. 6 and 7.

Removal of Foreign Bodies from Female Rectum.—Kakuschkin states in the *Russische med. Rundschau* for December that it is an easy matter to remove a foreign body from the female rectum if it is manipulated downward with two fingers of the hand introduced into the vagina. The perineum is pressed up and back by the other hand at the same time. In a personal case the nozzle of a syringe had dropped off in the rectum and the passage of stools failed to dislodge it, but it was readily manipulated downward with two fingers in the vagina. He remarks that the lower segment of the rectum belongs to the gynecologists, and that unless a foreign body is soon removed it is liable to be forced upward with the antiperistaltic movements.

THE RADICAL MASTOID OPERATION.*

FRANK ALLPORT, M.D.

Professor of Otology and Clinical Professor of Ophthalmology and Otology, Northwestern University Medical School, etc.
CHICAGO.

(Concluded from page 1092.)

Ballance, of London, makes a plastic operation that is used by many operators and undoubtedly yields good results. He cuts through the inferior wall of the cartilaginous meatus (Fig. 27) from its tympanic end to the inferior portion of the concha. This incision is then curved (Fig. 28) upward and backward until the level of the anterior beginning of the helix is reached where it stops.

This cartilaginous flap is thinned of all possible superfluous tissue, and sometimes of some of its cartilage, and is then turned back and the curved portion fastened with through and through sutures (Fig. 29) to the large anterior mastoid flap (Fig. 30). The parts are thus placed in position (Fig. 31) and the meatus expanded and forced against the bone as well as possible by firm gauze packing (Fig. 32). Some operators do not trust to the various flap operations to epidermize the bone cavity, and claim surer and speedier results by grafting skin into the cavity, either at the time of primary operation or at a secondary operation performed in from ten to fourteen days after the original procedure, by first completely reopening the wound, then grafting and again closing the wound, as recommended by Ballance. I do not use grafts at all unless in the subsequent healing of the case they become indicated, which I find to be rather seldom; nevertheless, there is no good reason for not using them and they undoubtedly expedite and assure perfect healing. Such skin grafts may be very large as recommended by Ballance (Figs. 36, 37, 38), who usually finds one graft to be sufficient, or smaller as proposed by Jansen and others, but of whatever dimensions they may be used they should, of course, always be cut as thin as possible by a sharp flat razor, the blade being lubricated by a warm normal salt solution. The graft may be transferred from the razor to a warm wet spatula (Fig. 34) by means of needles (Fig. 33) with handles, and then placed in its position on the bone by the same instruments, being, of course, careful to wipe the parts as dry as possible before the graft is permanently placed. It may be coaxed into its position by firmly twisted cotton on an applicator or by the "stoppers" (Fig. 35) as devised by Ballance. The grafts may be held in position by small balls of cotton dusted with aristol or xeroform powder, or Ballance recommends that the entire operative area be covered first with gold foil and then packed with small antiseptically-dusted cotton balls or with narrow, dry gauze (Fig. 39) and allowed to remain for one week and then removed by the meatus, as, of course, the post-auricular wound is immediately closed after the placing of the grafts, packings, etc. Some operators graft by placing either large or small pieces of tissue on the raw surfaces, through the meatus, and holding them there by small pledgets of gauze or cotton. This procedure is performed at varying times after the major operation, some preferring to do it at the first dressing, others a little later, and some only grafting at all when obstinate, unhealed surfaces call for such a procedure.

* Figures 42, 43, 44 and 45 are omitted. They will appear in the reprints of this article.