as much as possible in the open air. Where conditions are bad, the disease can best be held in check by preventing accumulation of secretions. The child should be made to hang over the bedside every morning and evening so that the cavities may drain to the greatest advantage. The position alone is enough to start the cough. Since putrefaction of the sputum is one of the most distressing features, vigorous attempts at disinfection should be made. The methods are:

1. By enclosing the patient in a chamber saturated with the vapour of creosote or some similar disinfectant, for increasing periods of time.
2. Inhalation of disinfectants by the use of the Burney Yeo mask.
3. Intratracheal injections of disinfectants—for example, menthol and guaiacol in olive oil.
4. Administration of pulmonary disinfectants—for example, creosote and guaiacol—by the mouth.

Artificial pneumothorax has been suggested and occasionally tried for bronchiectasis, but it is rarely likely to be successful because, even if the attempt is made before fibrous pleural adhesions prevent collapse of the lung, it is obvious that just those parts which are meant to collapse—namely, the dilated bronchi—are least likely to do so; as they are supported by dense, inelastic layers of fibrous tissue.

"POLYCYTHAEMIA HYPERTONICA":

Is POLYCYTHAEMIA A SOMEWHAT FAVOURABLE SIGN IN HIGH BLOOD PRESSURE CASES?

BY

F. PARKES WEBER, M.D., F.R.C.P.

It has often been noted in typical cases of splenomegalic polycythaemia (Vaquez-Osler disease) that in spite of the extremely high so-called "blood viscosity" (due to the great excess of erythrocytes in the blood) the blood pressure is only slightly if at all above the normal, and the heart is scarcely if at all hypertrophied. Thus, in the first really complete *post-mortem* examination on a typical case¹ (a man, aged 58 years), though the erythrocytes numbered 9 to 11 millions to the cubic millimetre of blood, the heart weighed only 298 grams (10½ oz.). The blood pressure had been moderately above the normal. In many other cases the brachial systolic blood pressure has been only about 150 mm. of mercury. That there is a dilatation of the blood capillaries in such cases has been proved by the observations of Brown and Giffin,² and also by the measurements of Hisinger-Jägerskiöld.³ L. J. Del Baere⁴ points out that in polycythaemia it takes less blood to supply sufficient oxygen to the tissues than in anaemia. Therefore, though, owing to high blood viscosity, the blood pressure may be somewhat increased, the heart has less work to do than in anaemia, and consequently cardiac hypertrophy is not rarely absent in polycythaemia, even where the blood pressure is above the normal.

The so-called "polycythaemia hypertonica" without splenomegaly (or "hypertonia polycythaemica") to which F. Gaisböck drew special attention in 1904 and 1905,⁵ seems to me to be probably a secondary or symptomatic polycythaemia, connected in some way with the persistent high blood pressure of early stages of granular kidney, or with primary arterial hyperpiesia (using Sir Clifford Allbutt's term) without definite signs of renal disease. In other words, the condition is one of renal or primary arterial high blood pressure with secondary polycythaemia rubra. It is not a very rare syndrome, occurring chiefly in middle-aged persons, and probably more frequently in males; perhaps Hebrews are somewhat more often affected than others. From true splenomegalic polycythaemia or erythraemia (the Vaquez-Osler disease) it is distinguished by the absence of splenomegaly, by the higher blood pressure, and by the absence of such marked facial cyanosis as is seen in old-standing splenomegalic polycythaemia. Moreover, the syndrome may, I believe, represent merely a phase or episode in the course of a case of high blood pressure, the polycythaemia rubra disappearing after a time, though the high blood pressure persists or increases.

Thus in a nervously active Hebrew man, aged 59 years, who was first seen by me in 1920 (when he was 52 years of age),⁶ the brachial systolic blood pressure has been generally 180 to 210 mm. Hg. The blood count in June, 1920, gave 8,000,000 erythrocytes and 12,000 white cells to the cubic millimetre of blood, haemoglobin 130 per cent. Since then the blood count has varied considerably, the case tending to become one of arterial hyperpiesia without polycythaemia. He is thin rather than fat, and has a red face, with a little generalized rosacea, without cyanosis. Sometimes there is slight conjunctivitis, probably of rosaceous origin.* His complaints have been chiefly pains, probably of fibrositic nature, in one part or another. At present he has a little sanguineous mucous expectoration; there are no x-ray signs of any pulmonary tuberculosis.

His brachial blood pressure is now (June, 1927): systolic 205 mm. Hg, and diastolic 150 mm. Hg. A blood count gives: haemoglobin 90 per cent.; erythrocytes 5,100,000 per c.mm. of blood, white cells 6,200 (polymorphonuclear neutrophils 65 per cent., lymphocytes 27 per cent., monocytes 4 per cent., basophils 1 per cent., eosinophils 3 per cent.). The urine (which was formerly free from albumin) is now of specific gravity 1020, and rather high-coloured; it contains a little albumin but no tube casts; it is free from sugar and does not contain excess of urobilinogen. The heart is somewhat enlarged towards the left.

In spite of considerable business and other worries this patient's general condition has on the whole remained remarkably good, and he looks rather young for his age; but he now almost certainly has an early stage of granular kidney. This brings me to the question of polycythaemia being a somewhat favourable sign in cases of persistent high blood pressure and early granular kidney. I think it must be taken on the whole as of relatively favourable prognostic significance. The polycythaemia, as Del Baere (see above) points out, to some extent relieves the heart from overwork. In fact, I now regard cases of "polycythaemia hypertonica" or "hypertonia polycythaemica" as cases of primary arterial hyperpiesia or of persistent high blood pressure of early stages of granular kidney, in which, owing to a favourable (sometimes familial) constitutional "polycythaemic disposition," the patient's organism has succeeded in developing a secondary blood reaction—namely, the polycythaemia—which to some extent helps to mitigate or delay the harmful effects of persistent high blood pressure.

REFERENCES.

- ¹ Weber and Watson: *Trans. Clin. Soc. Lond.*, 1904, xxxvii, p. 115.
- ² Brown and Giffin: *Amer. Journ. Med. Sci.*, Philadelphia, 1923, clxvi, p. 483.
- ³ Hisinger-Jägerskiöld: *Acta Med. Scandinavica*, Stockholm, 1923, lviii, p. 275.
- ⁴ Del Baere: *Wien. Arch. f. inn. Med.*, 1926, xii, p. 593.
- ⁵ F. Gaisböck: *Deut. Arch. f. klin. Med.*, Leipzig, 1905, lxxxiii, p. 363.
- ⁶ F. Parkes Weber: *Polycythaemia, Erythrocytosis, and Erythraemia*, London, 1921, p. 106, Case 62; also later account, *Proc. Roy. Soc. Med.*, Clinical Section, 1925, xviii, p. 37.

DEATH BY ELECTROCUTION.

BY

ELIZABETH E. JENKINS, M.R.C.S., L.R.C.P.,

AND

W. LEWIS COWARDIN, M.R.C.S., L.R.C.P.,

WEMBLEY, MIDDLESEX.

WE feel justified in submitting for publication the following details, as cases of electrocution are comparatively rare, and there is a paucity of information concerning them, in the books usually possessed by the general practitioner. This was stated at the time to be the first known recorded case of electrocution associated with broadcast reception.

The unfortunate lady was aged 61; she had been treated by one of us (E. E. J.) for some time for a chronic mitral lesion of the heart, but had been able to lead an active business life. She had gone to bed early, about 9.15 p.m., when she was last seen alive by her daughter. At 10 p.m. her daughter returned to wish her good-night, by way of

* With acne rosacea there is sometimes a kind of "rosaceous conjunctivitis," as some eye specialists have noticed. In regard to rosacea-like dermatoses affecting polycythaemic subjects, compare E. Pick and P. Kaznelson, *Derm. Woch.*, 1925, lxxx, p. 159; W. Richter, *ibid.*, 1925, lxxx, p. 1075; J. H. Sequeira, *Proc. Roy. Soc. Med.*, Section of Dermatology, 1917, x, p. 14.