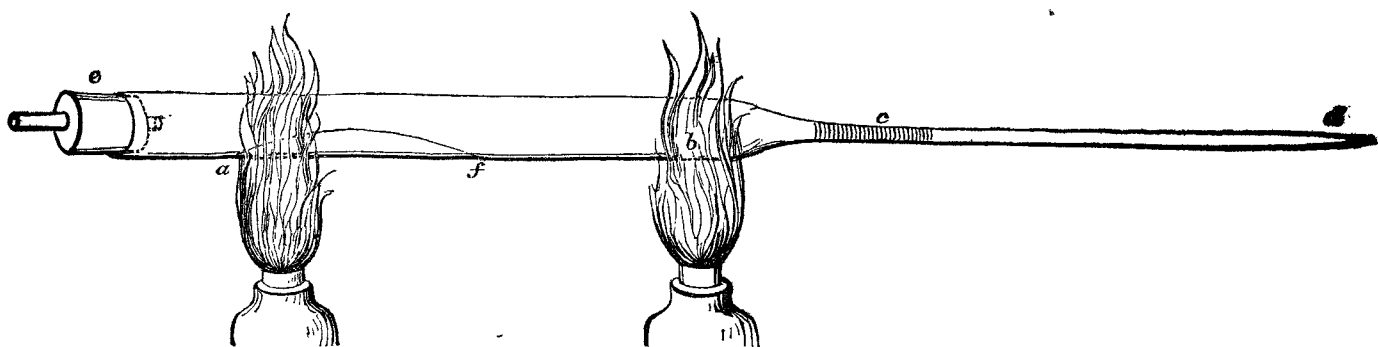


Fig. II.



When the apparatus is prepared, the little basin, with the sulphuret of arsenic (described above at D), is again weighed, and one-third of its contents taken off, and put upon a watch-glass; the exact weight of this abstracted portion is determined by substituting weights for it. The basin containing the two-thirds remaining is carefully kept. The abstracted third intended for reduction, is rubbed, in a small basin, previously heated in the water-bath, together with about twelve parts of a mixture consisting of three parts of dry carbonate of soda, and one part of cyanide of potassium (prepared according to Liebig's method); the completely intermixed powder is put upon a small strip of card-paper, beat into the shape of a gutter; this is pushed into the reduction-tube, up to the point *f*, and the tube is then turned halfround its axis. In this manner the mixture is placed at *a*, of the reduction-tube, without soiling any other part of this tube. The strip of card-paper is then cautiously withdrawn from the tube, so as to leave the mixture undisturbed.

The reduction-tube is then, by means of the cork, *e*, fixed to the gas-evolution apparatus; a moderate stream of carbonic acid gas is evolved by pouring hydrochloric acid into the funnel-tube (*a*, Fig. I), and the mixture most carefully dried, by very moderately heating the tube along its whole length, by means of a small spirit-lamp. When every trace of water has disappeared from the tube, and the gas stream has become so slow that the bubbles pass through the sulphuric acid at intervals of about a second, the spot *b* is heated to redness by means of a spirit-lamp. When this point is attained, another strong spirit-flame is applied to the mixture, progressing

from *a* to *f*, until all arsenic is expelled (the first flame, at the same time continuing in action at *b*).

The reduced arsenic precipitates at the spot *c*, forming a mirror, whilst an exceedingly small portion escapes at *d*, and fills the air with its garlic-like smell. The second spirit-lamp is, at last, slowly advanced to the spot *b*, so as to drive towards *c* all the arsenic which has adhered to the walls of the wide tube. After this both lamps are removed, the tube closed at the point *d*, by fusion, and heat applied, progressing from the point *d* towards the point *c*, so as to contract the mirror on this side also, which causes it to exhibit a particularly fine and metallic appearance. The tube is then cut off at the point *f*, closed, sealed, and thus becomes a permanent evidence, which may be referred to in any future point of the legal proceedings.

The remaining two-thirds of the sulphuret of arsenic (*vide supra*) are also put into a small glass tube; and this, too, is then closed, and sealed, and preserved for reference. If sulphuret of zinc, or sulphuret of antimony were present together with the sulphuret of arsenic, the zinc and the antimony would be obtained in their metallic state, upon dissolving in water the residue found in the reduction-tube (antimony is also found in the solution). They must be determined by the well-known methods now in use. Their weight is calculated upon the whole amount of the residue originally contained in the small porcelain basin (*vide D*), and the weight of their corresponding sulphuret subtracted from the total weight of the residue: the remainder is the amount of sulphuret of arsenic corresponding to the arsenic present.

#### CASE OF COMPLICATED OVARIAN DISEASE.

By CHARLES HOGG, Esq., M.R.C.S., London.

JANE RICKETTS, aged 55, Brick-lane, Old-street-road, consulted me on the 8th of March, 1841. She then complained of obtuse pain over the whole right hypochondriac region, extending to the scapula of the same side; pulse feeble; tongue coated with a brownish fur; appetite bad; acidity, with flatulence and constipation; difficulty of breathing on exertion, but no fixed pain in the chest, except in the inter-scapular region already alluded to; complexion sallow, and the general health much impaired; considerable morbid sensibility. On examination the liver felt hard and considerably enlarged, painful on pressure. In the abdominal region there was considerable enlargement, and fluctuation was distinctly perceptible. The urine was scanty, pale, but sometimes turbid, and depositing a sediment; a very trifling quantity of albumen was discoverable by the ordinary tests during the whole course of the disease. Her general health, for several years back, had been indifferent; she was considered temperate in her habits. Large doses of extract of taraxacum, with sulphate of magnesia and tincture of rhubarb, occasionally three grains of blue-pill, with five of compound extract of colocynth, apparently restored the liver to a healthy state. She also took a vapour-bath twice a week. The digestive organs regained their former vigour; with this her usual strength; both the skin and kidneys performed their functions healthily.

Iodine, in its various preparations, was employed, also diuretics, hydragogue cathartics, &c.; but not-

withstanding every effort the water accumulated, and I was compelled to have recourse to tapping on the 21st of April of the same year. On proceeding to the operation I found to my surprise, as well as that of my friend, Mr. Sparke, who saw the case two or three times, a hernia about the size of a full-grown child's head, protruding an inch below the umbilicus. It was easily reducible after bandaging and twenty-five quarts of fluid were drawn off. The consistence of this fluid was about that of olive oil, horribly offensive, and of a greenish-yellow-colour.

I now discovered the existence of what the general swelling had prevented me from ascertaining earlier, viz. a lobulated tumour extending beyond the pelvic into the abdominal region, measuring, as nearly as I could estimate, ten inches in length by five or six in breadth. It was extremely tender on pressure, and even on touch, although no pain was complained of on repose.

Moderate antiphlogistic treatment was had recourse to, and the vapour-bath continued. The recovery was rapid, and as she became apparently in excellent health and spirits, I had begun to hope that permanent good had been done. On the 2nd of August, 1841, she again requested my attendance; the abdominal enlargement was as great as before. Twenty-five quarts were again removed, the fluid was less offensive in smell, consistence, and colour than before. The former treatment was resumed, with the same effect, that is, the general health alone was benefited; the fluid now secreted more rapidly, which obliged me to remove it every fourth or fifth week, until the number of operations amounted to

twenty-nine, thus making altogether *one hundred and seventy gallons* of fluid which had been abstracted. I have unfortunately mislaid my memorandum of the specific gravity.

About the middle of January, 1844, unfavourable symptoms began to appear, which were ushered in by alternate rigors and hot fits; face flushed; pulse unusually feeble, at times scarcely perceptible; she complained now of violent pain in the right hip, which did not yield to either general or local applications, vomiting, cold perspirations, and at last she died on the 8th of the present month.

*Examination, Twenty-six Hours after Death.*

The body was by no means emaciated; after removing about ten quarts of fluid, the abdomen was laid open. Instead of the usual appearance, the omentum presented small pieces of greenish fatty matter. No traces of inflammation to any extent were observable; the parietal peritoneum was much thickened and of a cartilaginous consistence. The liver was greatly enlarged, and of a dark-slate colour. On an incision being made, there gushed out a dark grumo-purulent fluid, having a most offensive smell. The organ seemed to have become one extensive abscess, but little of its parenchyma remaining. The lungs, heart, kidneys, pancreas, spleen, did not exhibit any appreciable marks of disease. On first examination the ovaries, uterus, &c., appeared one mass of disease, connected by thin membranous bands to the surrounding parts. On carefully separating the tumour from its adhesions, the uterus and Fallopian tubes were found free from disease; there was more vascularity found than in the natural and healthy state. The patient was supposed to have some disease in the uterus twelve months before I saw her, and was treated for some time with reference to such disease. The tumour itself appeared to be composed of cells; their exact structure could not well be ascertained, as they seemed as if crushed into each other. The diseased ovarian mass was very vascular, several of the arteries were of considerable calibre; it appeared to be about the fourth of the size which it presented when noticed after the first tapping.

I have occupied too much space already to make many reflections on the case. I was most surprised at the state of the liver; after the first three months I had no reason to suppose there was much disease existing in that organ from the nature of the symptoms. The marked improvement in the general health and strength led me to suppose that the hepatic disease had been overcome.

Finsbury-place South, March 19, 1844.

CASE OF CONGENITAL MALFORMATION OF THE HEART; WITH REMARKS.

By A. ARAN, M.D., formerly House-Physician of the Hôtel Dieu, Paris.

A YOUNG girl, *ætat.* 20, was admitted into the Hôtel Dieu, under Dr. Honoré, Feb. 9, 1842, with lips, nose, cheeks, palpebræ, hands, and feet of a violet colour. Since her birth she has always presented the above colour. All her family are well. Now and then she is seized with numbness, headach, and giddiness; she often loses the power of motion, and the use of her senses. She is subject to painful palpitations of the heart, principally when she is walking. She cannot go up stairs without great dyspnoea. While walking and ascending there is constant augmentation of the blue colouration; cough when hurried, not otherwise; often cedema of the feet; all these symptoms have increased within the last few days, owing to her laborious occupations. For the last six or eight months she has presented slight swelling of the inferior and right part of the chest, which has increased from day to day, and is painful.

At the visit, February 12, she presented the following state:—Stature small; understanding imperfectly developed; complexion much darker than natural, the nose, lips, and palpebræ of a deeper colour; the hands and feet are of the same hue; the fingers very long, and the last phalanges enlarged and bulbous; the breasts are in the rudimentary state, and she has no signs of puberty;

no cough nor dyspnoea; good appetite and digestion; bowels free. On the right side of the thorax, a painful swelling, as large as her fist, soft and fluctuating, is observed; the skin is thinner in an extent of two inches. The precordial region is not prominent; the dulness is two inches and a half high, and three and a half inches in width; the apex of the heart is behind the fifth intercostal space; impulsion smart and short, but considerably stronger and more extensive than natural, it is followed by a diastolic back-stroke; opposite the apex of heart the two sounds are perceived, with an appearance of systolic murmur; but the first is a loud prolonged bellows-murmur, with a very sensible purring tremor, opposite the arterial orifices of the organ, and the second very short and loud. The bellows-murmur is still very sensible and superficial over the pulmonary artery, from its valves to the top of the sternum, along the left side of this bone. This murmur is limited superiorly by the clavicle, and on the sides by the right edge of the sternum, and by a perpendicular line proceeding from the external extremity of the left clavicle; no murmur in the vessels of the neck, nor upon the course of the aorta. Pulse regular, 112, very small and weak; resonance of the lungs normal, and the vesicular murmur is pure in all the extent of the chest.

*Diagnosis.*—Cyanosis; communication between the left and right side of the heart; probably patulence of foramen ovale; hypertrophy with dilatation of the right ventricle; obstruction of the orifice of the pulmonary artery.

The next day the swelling was opened by the *subcutaneous* method, but all the pus was not evacuated, and M. Honoré was obliged to open the abscess largely.

March 1. The pus furnished by the abscess is very scanty; it is a yellowish and scentless sanies.

16. Great pain opposite the left sacro-iliac symphysis; she cannot walk.

20. Painful swelling of the hip, with doubtful fluctuation, but the following days the fluctuation was very sensible, and the old abscess did not suppurate; cedema of the legs; the bowels become deranged, and erysipelas developed on the thorax; the cyanosis greatly increased, and the patient died the 28th April.

*Autopsy.*—The body generally cedematous and of a bluish hue, but much less pronounced than during life.

The pericardium is free from adhesions, and contains only two or three spoonfuls of a yellowish and transparent fluid; the heart is one half larger than natural; the right ventricle is one-third more voluminous than the left. The walls of the right ventricle are thickened to half an inch; the *carneæ columnæ* are very strong and numerous; the right auriculo-ventricular orifice and its valve are not stretched nor narrowed; the arterial orifice of the right ventricle is very remarkable and is seated at the superior part of the ventricle, near the septum; it is contracted to the size of a goose-quill; its circumference is surrounded by cartilaginous patches and almost obliterated by small yellowish and fibrinous vegetations, very little adherent to the edges of the orifice. The pulmonary valves are higher seated, an inch above the contraction, so that between the orifice of the ventricle and the pulmonary valve is a little cavity, half an inch high, and one inch large, covered by the lining membrane of the heart, slightly thickened, and containing a polypous concretion; the pulmonary orifice is contracted to a quarter of an inch, and the arterial coats are thinner than natural; no vestige of ductus arteriosus; the ventricular septum is perforated by an aperture at the mouth of the aorta, and forms a common opening between that vessel and the two ventricles; this aperture is smooth and circular, and half an inch in extent; aortic orifice and valves perfectly sound. Right auricle dilated and slightly hypertrophied, especially in its *columnæ carneæ*; foramen ovale opened at a vertical slit formed by two small blades, of which the greatest is furnished by the left auricle and the smallest by the septum itself.

Great consolidation of the lungs by tubercles, of which a great many are softened; two little caverns at the summit of the left lung. Tenth rib carious, and in this spot the bone is necrosed and separated from the rest to the extent of one inch.