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Clinical Notes and Cases.

A Case of Insanity Associated with Pregnancy and Previous Exophthalmic Goitre.(1) By G. Ernest Peachell, M.D. Lond., Medical Superintendent, Dorset County Mental Hospital, Dorchester.

The case I am about to describe seems of sufficient importance to bring to your notice, as it presents many points of interest.

F. F—, æt. 34, married, was admitted here on August 23, 1920, suffering from acute mania, and eight months pregnant.

History of case.—The history obtained personally from the husband and the family doctor and others was as follows: Married eight years; two children, æt. 12 and 6. While pregnant with her second child and while the husband was serving in the army she developed exophthalmic goitre of rather a severe type. She then showed no mental symptoms with it, and was treated in 1915 and 1916 at the Boscombe Hospital and at one of the London Hospitals with X ray and radium for eighteen months with much benefit. Most of the symptoms disappeared except the exophthalmos, and although in reduced health she did her housework well and looked after the children well up to June, 1919, when slight mental symptoms developed, but she continued to look after her home fairly well till three months ago, since when she progressively got worse and was in bed the last fortnight previous to admission in an acute state—sleeping little and extremely restless, but taking food readily. She became pregnant about eight months ago.

Family history.—No insanity, except the mother is stated to have had a slight mental attack in India, but was not certified. She is now quite well.

The medical certificate on admission stated: " I can get no sense out of her. The open window has on it a lot of articles, boots, dishes, etc., which she says is a gift of God. The husband says that she is stranger in her ways, threatens her children, is excited and throws the furniture out of the window and goes out of doors in her night-dress."

(1) Paper read at S.W. Divisional Meeting held at the Dorset Mental Hospital on April 28, 1922.

Condition on admission.—Physical: She is a rather short, spare woman, poorly nourished, height 5 ft. 5 in., weight 8 st. 8 lbs. with clothes, anæmic; eyes very marked exophthalmos, pupils dilated; thyroid somewhat enlarged, hard and apparently fibrotic. Heart slow, regular action, no tremor. Is about eight months pregnant.

Urine: Sp. gr. 1020, acid, pale colour, slight albumen. No sugar. Other organs apparently healthy.

Mental.—She is elated, restless and excited, throws herself about, talks at random and does not realise where she is. She can give little attention and is aimless in her movements.

Progress of case.—She continued in a state of acute mania, and on August 30, without warning and almost painlessly, she gave birth to a female child. Her mental state did not "clear up," and she gradually got thinner and weaker. Early in November the urine showed that she had active nephritis—diminished quantity with much albumen and casts. She was becoming more anæmic and had some œdema of feet. In December, despite the physical health deteriorating, she commenced to improve mentally, and on December 27 it is reported: "She is much more composed and less restless, is taking her food better and sleeping fairly well, but she is very thin and weak owing to kidney disease." She showed marked bronzing of the skin, muscular weakness and anæmia, and had it not been for the obvious kidney disease Addison's disease might have been suspected.

In January severe sickness developed and lasted for about a week, but there were no uræmic symptoms. The urine was loaded with albumen and casts; no glycosuria. The mental condition continued to improve, although she was getting more feeble; for the last month of her illness she was to all intents and purposes sane, quiet and grateful for what was being done for her, helpful in nursing and hopeful for recovery. She became very emaciated, got feebler, and died on February 18, 1921, from exhaustion. She was conscious up to within a few hours of death, and there was no uræmic termination.

Post mortem.—Body very emaciated, brown pigmentation of skin, marked exophthalmos. Thyroid not prominent but slightly enlarged. Brain well formed and to the naked eye normal. Heart muscle good. Lungs healthy. Terminal plastic pleurisy of right middle lobe. Suprarenals, pituitary, and pancreas, nothing obviously abnormal. The suprarenals were well developed and the right suprarenal larger than normal. Kidneys: Right, weight 4 oz., very pale, soft and greyish white, uniformly enlarged, amyloid patches in cortex, capsule slightly adherent to cortex; left, weight $1\frac{1}{4}$ oz., very small, greyish white and pale, cortex reduced, capsule stripped, leaving erosions of cortex. Ovaries were sclerosed but not cystic. Spleen small and rather soft. Liver, uterus and other organs apparently healthy.

Microscopical sections.—Portions of the kidney, thyroid, ovary, suprarenal, pituitary and spleen were hardened in formalin, embedded in paraffin and stained with hæmatoxylin and van Gieson, alum hæmatoxylin and eosin and methylene-blue.

Kidney: Sections show advanced parenchymatous nephritis. There is fatty degeneration of the renal epithelium and much epithelial

débris, etc., in the tubules, with leucocytic infiltration round the glomeruli. There are practically no signs of fibrosis or interstitial nephritis.

Thyroid: There is enormous thickening of the fibrous capsule and marked excess of fibrous tissue in stroma, compressing the vesicles, which show undue vacuolation, and many contain an excess of colloid material. Numerous blood spaces are obvious and there is increased vascularity of the gland.

Ovary: There is excess of fibrous tissue with numerous large blood sinuses and a thickened fibrous capsule, also intense vacuolation of the organ, and only in places can an ovarian follicle be seen. In the centre appears a large crenated area, apparently composed of unstriped muscle. There is no corpus luteum shown.

Pituitary: Sections cut horizontally show anterior lobes on both sides, enfolding the posterior lobe, and the pars intermedia with cleft is also seen. The anterior lobes appear normal, but there is some undue vacuolation of the posterior lobe and small patches of colloid are discernible.

Suprarenal: Practically normal. The cortex and medulla are well shown, and chromaffin cells noted from their position, structural arrangements and staining properties.

Spleen: Sections stained with hæmatoxylin and eosin are normal. I regret no blood films were taken during life. Doubtless they would have shown typical "secondary anæmia."

From the details of the case and pathological findings I suggest there were two primary factors for her mental breakdown: (1) Previous exophthalmic goitre associated with her second pregnancy six years before, leading later to fibrosis and non-function of this gland with hypothyroidism; (2) pregnancy producing parenchymatous nephritis and so toxic absorption in her third pregnancy and after childbirth, leading to exhaustion and death from renal inefficiency.

[The author here discussed certain points concerning the ductless glands and their inter-relationship, and the influence they have on general metabolism and on the external secretory organs such as the liver, pancreas, and the kidneys.]

In this patient there was a diminished thyroid secretion. The gland, showing previous hyperthyroidism (exophthalmic goitre), had, as a result of excessive function and of treatment with X rays and radium, become fibrotic, and so a state of hypothyroidism had resulted. She had a poorly developed left kidney, and her previous pregnancy, severe illness and exophthalmic goitre had left her in a reduced state of health to meet the strain of her third pregnancy and with a defective hormone balance. Her one sound kidney was unequal to the task and "the kidney of pregnancy" developed, allowing the absorption of toxic products from the fœtus, and acute insanity as a result of this. It should have been mentioned

that after delivery and until her death, though not suckling the child, she did not menstruate.

Mental symptoms were noticeable for over twelve months before the acute symptoms developed and for some months before conception, thus pointing to thyroid insufficiency being a factor in originating the attack, and the pregnancy with renal inefficiency was the determining cause for the acute breakdown.

To me the most surprising fact in the case was her mental recovery, almost to normal, whilst obviously dying from her grave physical illness. I have recorded in a paper—"The Influence of Physical Diseases on Mental Conditions"—the often beneficent effects of such illness, but I have never seen in one so gravely ill, suffering from kidney and thyroid disease, such mental improvement. In fact, she had apparently "cleared up," as a case of acute puerperal mania, free from complications, usually does after several months, and had it not been for her extremely weak state and the need for skilled nursing, I was quite prepared to send her home to her husband.

Dr. Bedford Pierce, in opening a discussion—"Recovery from Mental Disorder"—before the Psychiatric Section of the Royal Society of Medicine, stated that he inclined to the view that in the great majority of cases recovery was due to the removal of a toxæmia by the recuperative processes inherent in the organism; but here was a case in which active toxæmia persisted to the end. However, he and others agreed as to the small amount of knowledge we possessed as to why, in many mental cases deemed unfavourable, recovery took place; and the case I have described would, considering all the facts, have been considered a most unfavourable one. There would certainly appear to have been no psychogenic reason for her recovery.

A Case of Lilliputian Hallucinations with a Subsequent Single Macropsic Hallucination.

By GERALD W. T. H. FLEMING, M.R.C.S., L.R.C.P., Deputy Medical Superintendent, Mental Hospital, Ryhope, Sunderland.

A. B. C., æt. 62, widow, was admitted to the Sunderland Mental Hospital on October 10, 1922, suffering from confusional insanity.

Family History.

We were unable to learn anything of the patient's family history.

Personal History (from her adopted son).

We learnt that she had always been a bright and cheerful woman who had led a hard life. She had always taken her food well and had been a teetotaler. She had had no attacks prior to the present. She had always suffered from rheumatism and heart trouble since a girl.

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