If antibody to R.S. virus was detectable by the methods used, the majority (76%) of persons had both neutralizing and C.F. antibodies in their serum, as is shown in the Chart. Of the 29 sera which did not contain either C.F. or neutralizing antibodies, 23 (79%) were from children aged 0-4 years.

The high incidence of antibodies in umbilical-cord serum which was similar to that of the child-bearing age-groups indicated the transplacental passage of antibodies.

Summary

Examination of 329 samples of serum from all age-groups was made to detect antibodies to the respiratory syncytial virus. At the age of 5 years, and in all older age-groups, over 66% of the sera contained both neutralizing and complement-fixing antibodies. The lowest incidence of antibodies was in the 6 months to 1-year age-group. A high incidence of infection with

respiratory syncytial virus in the population was indicated by the finding of neutralizing antibody in 93% of sera from persons over 15 years of age.

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Incidence of de Quervain's Thyroiditis: Ten Cases from One General Practice

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The patient with de Quervain's thyroiditis usually presents with a painful thyroid swelling of rapid onset. In severe cases, malaise, fever, fatigue, nervousness, and loss of weight are found, but the patient rarely becomes hypothyroid unless she is mistakenly treated by thyroidectomy. The characteristic finding on examination is the firm or hard, very tender goitre. In most cases the whole gland is involved, but in a small proportion—7 out of 38 in Crile and Rumsey's (1950) series—the swelling remains confined to one lobe. The erythrocyte sedimentation rate is raised and hypochromic anaemia is common, but the leucocyte count remains normal. Thyroid antibodies either are absent or are present in a very low titre. The diagnosis can be confirmed by radioiodine studies, which show complete suppression of radioiodine uptake when the whole gland is involved, and areas of reduced uptake when only one part is affected. Needle biopsy shows a picture of acinar destruction, fibrosis, and infiltration with multinucleate giant cells, lymphocytes, and plasma cells.

De Quervain's thyroiditis is quite distinct from autoimmune thyroiditis, in which thyroid pain and tenderness are unusual, the onset of the illness is less rapid, the patient is often hypothyroid, radioiodine uptake is normal or raised, and thyroid autoantibodies are present in a high titre. Because it has many features in common with virus infections, de Quervain's thyroiditis is thought to be due to a virus. Evidence of mumps virus infection has been found in one outbreak in Israel (Hylan *et al.*, 1957) and in a single case in Britain (Felix-Davies, 1958). In other cases, however, tests for virus antibodies have been negative.

Judging by the available evidence, de Quervain's thyroiditis seems to be rare in Britain. Doniach *et al.* (1960) saw only four cases in three years at the Middlesex Hospital, and Meachim and Young (1963) could find only two examples in surgical material from 1,282 patients with primary thyroid disease in

Sheffield. It has been suggested, however (*British Medical Journal*, 1963), that many mild cases may be misdiagnosed or treated at home. Several authors have reported a high incidence of diagnostic errors in this disease. In Crile and Rumsey's (1950) series errors were found in 15 out of 38 cases, the commonest mistaken diagnoses being nodular goitre, thyroid carcinoma, and haemorrhage into an adenoma. The diagnosis may be obscured by an asymptomatic goitre, by anaemia, or by minimal or absent febrile symptoms (Skillern *et al.*, 1956). The pain on swallowing may lead to a mistaken diagnosis of pharyngitis (Vanderlinde and Milne, 1960).

The purpose of this paper is to describe 10 cases of de Quervain's thyroiditis seen in one general practice during the past nine years. During the same period my records show 22 new cases of thyrotoxicosis, eight of hypothyroidism, and one of autoimmune thyroiditis. The practice National Health Service list was 5,943 in 1954 and 7,891 in 1963.

Case Histories

The main clinical and pathological features are summarized in the Table. All the patients except one (Case 3) presented with pain in the front of the neck, and in all except this patient the gland was firm or hard, and very tender. In Case 1 the hardness of the gland led to a mistaken diagnosis of carcinoma of the thyroid. In Cases 1, 2, 5, 6, 8, and 9 the whole gland was enlarged; in Cases 3, 4, 7, and 10 the swelling was confined to one lobe. The following case reports illustrate the course of the disease.

Case 8.—A housewife aged 40 complained of lassitude and pain in the front of the neck of six weeks' duration. She had not felt feverish. The thyroid was diffusely enlarged, firm, and tender. Two weeks after the first examination the pain was less severe and the gland smaller; and in another two weeks the tenderness had gone. Four weeks later she was feeling well, but the thyroid was still firmer than normal. During the next month she contracted

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Clinical and Pathological Features in 10 Cases of de Quervain's Thyroiditis

Case No.	Year	Sex	Age	Pain in Thyroid	Thyroid Swelling	Thyroid Tenderness	Systemic Disturbance	E.S.R. (mm. in 1 hr.)	Fever	Virus Complement-fixation Tests	Thyro-globulin Precipitin and Tanned-red-cell Tests	Histology	Treatment	Result	Duration of Illness
1	1956	F	49	+	+	+	+	29	—	Not done	Not done	Islands of atrophic acini, with giant cells and lymphocytes, among coarse strands and masses of dense fibrous tissue	Thyroid-ectomy	Became hypo-thyroid after operation	3 months
2	1956	F	35	+	+	+	+	32	—	" "	" "	Thyroid biopsy: parenchyma almost completely replaced by fibrous tissue; surviving clusters of acini surrounded by plasma cells and lymphocytes; small numbers of multinucleate giant cells	None	Recovered. Small residual goitre	2 "
3	1957	F	44	—	+	—	+	Not done	—	Not done	Not done		None	Recovered	3 weeks
4	1958	F	24	+	+	+	—	" "	—	" "	" "		"	"	2 "
5	1959	M	18	+	+	+	+	"125"	+	Mumps: 1 in 8	" "		Penicillin	"	1 month
6	1960	M	73	+	+	+	+	80	—	Not done	Negative		None	"	2 "
7	1962	M	34	+	+	+	+	11	—	Adenovirus group: 1 in 8	T.R.C. test: 1 in 5		"	"	2 weeks
8	1963	F	40	+	+	+	+	33	—	Parainfluenza 2: 1 in 8	T.R.C. test: 1 in 25		"	"	4 "
9	1963	F	13	+	+	+	+	28	+	Adenovirus group: 1 in 16	Negative		Iron for anaemia	Recovered. Small residual goitre	5 "
10	1963	F	42	+	+	+	+	30	+	Negative	T.R.C. test: 1 in 5		None	Recovered	4 "

mumps parotitis from her 5-year-old daughter: this ran its normal course without any exacerbation of her thyroiditis. One month later the thyroid was normal to palpation.

Case 10.—A married State-registered nurse aged 42 felt a painful swelling in her neck one afternoon. The next day she felt ill and the pain was at its worst, radiating to the right ear and cheek. The swelling was very tender. When examined on the following day there was a firm, smooth, tender swelling, the size of a hen's egg, in the right lobe of the thyroid. Temperatures of up to 99.8°F. (37.7°C.) were recorded on the first four days of the illness. After five days the pain had gone, but the goitre was still tender. On the seventh day the goitre was the same size but no longer tender. On the fourteenth day the swelling had begun to subside, and a week later it was almost gone. The sedimentation rate fell to normal in four weeks.

Two cases (Nos. 3 and 4) were diagnosed in retrospect and the data are therefore incomplete. One patient (Case 3), who came after the nodule had been present for a week, was diagnosed as suffering from thyroid adenoma and referred to a surgeon. She was put on the waiting-list for operation, but the swelling subsided in two weeks. In Case 4 the diagnosis was originally haemorrhage into an adenoma. I have felt justified in including these cases because of their close resemblance to Case 10. In Case 7 the sedimentation rate was not raised, but constitutional disturbance was present and the course of the illness was very similar to that in Case 10.

Discussion

The incidence of de Quervain's thyroiditis in this small population is unusually high, and, since the cases are spread over a period of nine years, this cannot be explained as a single outbreak, as in the cases described by Bergen (1958). Although it would be unwise to generalize from such a small sample, it seems likely that the disease is commoner in Britain than we believe. De Quervain's thyroiditis has received such scant attention in British textbooks that its features are unfamiliar

to many physicians; it would not be surprising, therefore, if many cases were to be undetected or misdiagnosed. An increased awareness of the disease may lead us to revise the prevalent view that it is a rarity.

Summary

The clinical and pathological features of de Quervain's thyroiditis are briefly reviewed, and attention is drawn to the frequency with which it is misdiagnosed. Evidence for the belief that the disease is rare in Britain is reviewed.

Ten cases of de Quervain's thyroiditis are described in one general practice during a nine-years period, and it is suggested that the disease may be commoner in this country than is generally supposed.

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