complained of indigestion, but, on questioning, he said he was "a martyr to attacks of indigestion." Case T found that his rheumatic pains, for which he had had many medical remedies, cleared "miraculously" while he was under treatment, but they returned as soon as the treatment was stopped.

The patients who were under observation for less than six months were asked to communicate with us should there be a relapse, but as yet we have had no response.

Two cases of subacute disseminated lupus erythematosus were also treated with chloroquine sulphate with no satisfactory clinical response.

Summary and Conclusions

Eighteen cases of chronic discoid lupus erythematosus were treated with chloroquine sulphate by mouth. The results are tabulated and discussed.

It is considered that chloroquine sulphate is as efficient a form of palliative therapy as any previously used, though not as yet the answer for the chronic disease. There is still a place for CO₂ snow treatment where there is a single discoid lesion.

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CHRISTMAS DISEASE ASSOCIATED WITH FACTOR VII DEFICIENCY CASE REPORT WITH FAMILY SURVEY

BY

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Reports of congenital deficiencies of isolated blood coagulation factors have become common. Instances of more than one such deficiency occurring simultaneously in the same individual have been much less frequently reported. Koller (1954) has drawn attention to this possibility by describing a case of combined haemophilia and Factor V deficiency. Soulier and Larrieu (1953) have reported a case of combined haemophilia and Christmas disease, the diagnosis being based on the failure of the patient's plasma to correct the clotting defect of either haemophilia or Christmas disease. To our knowledge, no association of Factor VII deficiency with Christmas disease has previously been reported. Such a combination has recently come to our notice in a family, some of whose members suffer from haemorrhagic manifestations.

Case Report

A 29-year-old man was admitted to Addenbrooke's Hospital following a road accident in April, 1954, when he received a cut over the right eye which had continued to bleed intermittently for two weeks. He had had excessive bleeding from traumatic cuts since childhood, and recurrent haemarthroses of the elbows and knees had resulted in

partial flexion deformities of these joints. In 1951, following an appendicectomy, he had required 6 pints (3.4 litres) of blood, and the wound had healed by secondary intention (occasionally sutures had been sloughed out since then). In November, 1953, a dental extraction had required three weeks' hospitalization and 6 pints (3.4 litres) of blood. He had received 6 pints of blood at another hospital just before this latest admission in an attempt to control the bleeding from his forehead, with only moderate success.

General physical examination was unremarkable. Both wrists showed impairment of dorsiflexion, and there was 20 to 30 degrees limitation of extension in both knees and elbows. The cut in the forehead had been sutured, but a large subcutaneous haematoma had caused the wound edges to gape. Oozing from the wound was moderate. There was a nylon suture protruding from the appendicectomy wound in the abdominal wall, surrounded by a small area of granulation tissue. X-ray examination of the knees showed loss of articular cartilage, subarticular cyst formation, and sclerosis and osteophytes of both knees, particularly on the right side. The changes were regarded as compatible with those of repeated haemarthroses.

Laboratory investigation of the urine and routine haematological examination revealed nothing abnormal. Coagulation studies are shown in Table I.

TABLE I

Test	Method	Result	Normal Values
Clotting-time ..	Modified Lee-White	17.5 mins.	5-10 mins.
Platelet count ..	Rees-Ecker	670,000/c.mm.	2-400,000/c.mm.
Oil-suspended clot retraction	Budtz-Olsen (1951)	13% in 4 hr.	20% in 4 hr.
Prothrombin consumption	Quick <i>et al.</i> (1949)	22.9 sec. in 1 hr.	Over 30 sec. in 1 hr.
One-stage prothrombin time	Quick	22.3 sec. (40%)	80-100%
Factor V ..	Stefanini (1950)	95%	90-100%
Two-stage prothrombin	Biggs and Douglas (1953a)	104%	85-100%
Factor VII ..	Koller <i>et al.</i> (1951)	44%	90-100%
Thromboplastin generation test—fully corrected by normal serum but unchanged by normal plasma	Biggs and Douglas (1953b)	27%	100%

These tests indicated a defect in thromboplastin generation compatible with the diagnosis of Christmas disease, and a prolonged one-stage prothrombin time due to a marked reduction in Factor VII. By definition, Christmas disease is characterized by a normal one-stage prothrombin time (Biggs *et al.*, 1952), and Factor VII deficiency alone produces a defect in the thromboplastin generation test only if less than 10% of normal (Biggs and Marfarlane, 1953). Thus there appeared to be two separate deficiencies present in this patient. No evidence of liver disease existed to explain the reduced Factor VII level.

Clinical Course

He was given by intravenous drip 80 ml. of compatible 10-day-old serum, which reduced his clotting-time to 8.5 minutes, raised his prothrombin consumption to 26.2 seconds in one hour, shortened the one-stage prothrombin time to 17.2 seconds (58% of normal), and improved the clot retraction to 20% in four hours. Under cover of this treatment, the haematoma of the forehead was evacuated and re-sutured, and covered with a pressure bandage. At the same time the nylon suture was removed from the abdominal wound and a pressure bandage also applied. There was no excess haemorrhage as a result of these procedures. He was given a further 40 ml. of serum immediately post-operatively. His tests had returned to their pre-treatment level by 18 hours post-operatively. The sutures were removed without trouble 10 days later under cover of more serum intravenously. Traction to the right leg produced some improvement in the degree of flexion contracture. He was discharged after an uneventful convalescence.

Our use of serum, rather than plasma or whole blood, may call for brief comment here. Both Christmas factor and Factor VII are stable in stored blood, plasma, or serum for considerable periods (Biggs *et al.*, 1952). We have found Christmas factor to be stable in stored oxalated plasma and normal serum for three weeks. Therefore, any of these fractions may be used in the treatment of Christmas disease, Factor VII deficiency, or a combination of these defects. In the course of work carried out by us on another patient with uncomplicated Christmas disease, we have found that 1 ml. of serum is approximately equivalent in therapeutic effect to 10 ml. of A.C.D.-stored plasma. Because of this finding, and because serum provided a supply of both deficient factors in this patient, it was used exclusively in this case, with good results.

Family History

The presence in this patient of a combined deficiency, apparently of a congenital nature, called for an effort to test all available members of his family. This proved only

Family tree of patient. The numbers refer to the subjects (see Table II). □ Male, non-bleeder. ■ Male, bleeder. ○ Female. ▨ Male, reported bleeder, not studied.

moderately successful owing to distant residence, unwillingness on the part of some members, and death of others. The accompanying genealogical tree is based on information received from several members of the family. The patient's maternal grandmother could not be tested; his grandfather and both his father and stepfather were dead. An apparently unaffected uncle, a bleeder brother, and two sisters were not available for testing. Only males showed a bleeding diathesis. The principal clinical manifestations in all affected males were haemarthroses and subcutaneous haematomata.

In Table II are summarized the results of tests performed on the members identified in the family tree by numerals. Since these tests had to be done either in the patient's home

TABLE II.—Results of Tests in Members of Family

Subject	Bleeder	Clotting-Time (min.)	Pro-thrombin Consumption (3 Hours)	I-Stage Pro-thrombin (% of Normal)	Factor VII (% of Normal)	Peak Thromboplastin Generation (% of Normal)	Correction by Plasma or Serum
1	—	8	(sec.) 48.2	65	65	98	—
2	—	9	34.9	75	75	93	—
3	—	7	64.5	72	72	80	—
4	—	8.5	93.0	100	100	80	—
5	—	8	43.3	50	50	93	—
6	+	18	24.8	45	45	12	Serum
(patient)	+	17	25.8	46	45	10	—
7	+	17	28.2	48	50	11	—
8	+	17	28.2	48	50	11	—

or two hours later on return to the laboratory, their range had to be limited, and normal controls were subjected to similar conditions.

Discussion

This investigation is reported in order to draw attention to the existence of combination forms of isolated coagulation factor deficiencies. In this family the most striking

feature seems to be that, whereas both sexes showed deficiencies of Factor VII, only some of the males had Christmas disease as well; all of the clinical "bleeders" belonged to this latter group. From these results it would appear that the critical haemorrhagic level of Factor VII is less than 40% of normal and that it was the deficiency of Christmas factor which determined the tendency to bleed. It is interesting to note that the serum of the mother (a female carrier of Christmas disease) was as effective in the correction of the abnormal thromboplastin generation tests as normal human serum, providing further evidence of the inability to demonstrate a laboratory defect in the female carrier of this disease.

Summary

A survey is made of a family, some of whose members exhibit a combination of Christmas disease and Factor VII deficiency. Pathological bleeding was confined to those showing both defects.

The advantage of serum in the clinical management of such patients is illustrated.

We wish to thank Sir Lionel Whitby for providing the facilities for this study, and Miss S. C. Tomlin for valuable technical assistance. We are indebted to Mr. D. J. Martin for referring to us the patient whose case is reported in detail.

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A CASE OF PHAEOCHROMOCYTOMA

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As comparatively few cases of phaeochromocytoma are described in the literature of this country the following case is recorded. The number of cases of successful removal of the chromaffin tumour of the adrenal is smaller still, many of the reported cases having been found at necropsy (Crowther, 1951; Jelliffe, 1952; Davies, 1952; Priest, 1952). A review of the world literature up to 1949 is given by Graham (1951).

Phaeochromocytoma is probably a commoner condition than the literature would lead one to believe, and it is likely that many cases remain undiagnosed. By publishing details of these cases the condition will become better known and take its proper place in the diagnostic field. An additional reason for publication is that most new cases still present special difficulties in diagnosis and surgical treatment.

Case Record

A married woman aged 52 was admitted to hospital with sweating attacks following a respiratory infection. There were few signs in the chest, however, no pyrexia, and x-ray examination showed that her chest was normal. She then volunteered that she had suffered from these sweating