INTERMITTENT HÆMORRHAGE FROM MALARIAL INFLUENCE.

BY

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(COMMUNICATED BY HOWARD MARSH, F.R.C.S.)

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HÆMORRHAGE under many denominations has been described by surgical writers, but as far as I am aware, and I have taken some trouble in examining various works and made inquiry from those likely to have experience in the matter, periodic hæmorrhage occurring in a surgical case from an open wound apparently due to malarial influence has not been described. Such description may, however, have escaped my notice.

Bearing on the subject Dr. J. Wickham Legg has recorded several cases of paroxysmal hæmaturia, resembling a fit of ague, in his valuable essay in the 'Reports of St. Bartholomew's Hospital' for 1874; and in the 'Medical Times and Gazette' of the 16th of October, 1875, Dr. Francis, late of the Indian Army, gives the case of malarial hæmaturia in a child.

It is scarcely necessary to observe upon the fact that

a person having had intermittent fever is liable even many years afterwards to a return of the disease on the occurrence of shock, loss of blood, or constitutional derangement. Sir James Paget, in observing on this fact, has remarked in his 'Clinical Lectures and Essays,' "I have so often noticed this that, whenever I hear of severe rigors following any operation, I ask for a previous history of ague, and have sometimes found that the patient has almost forgotten it in the long lapse of time since he suffered from it." At Netley Hospital this circumstance is frequently observed among the invalids from India. To whatever, therefore, may be the cause which has induced the ague in these patients, to that same cause I attribute the intermittent hæmorrhage in the case I am about to detail; let it be "malaria," "electricity," or "chill," according to the different views which have lately been put forth on the subject, which had become latent.

The subject of the hæmorrhage was a young soldier in the 70th regiment, twenty-two years of age, service five years, sixteen months of which were spent at home and three years and eight months in India. No history of syphilis or hereditary hæmorrhagic diathesis. He appears to have enjoyed good health in India until September, 1873, when at Rawel Pindie he was attacked with intermittent fever of severe form, from which he suffered for upwards of three months, and which suddenly culminated in an attack of rheumatism of both knee-joints. The right knee recovered, but the left continued painful; his health became much impaired, strumous abscesses formed in his neck, and he lost part of the hard and soft palate from necrosis and ulceration. He was sent to the Sanitarium at Murree in April, 1874, but not having benefited by the change of climate was invalided to England in March, 1875.

On arrival at Netley, April 30th, he was in a weak anæmic condition; his weight was only six stone. The left knee was swollen and painful, but, there being no immediate necessity for surgical interference, an endeavour

was made to improve his health, which for some time succeeded, but in July the joint having become very painful, with loss of rest, profuse perspirations, and diarrhoea, it was considered desirable to remove the limb at the knee-joint.

On the 8th of July, by the bloodless method, the patient being under the influence of ether, I amputated the limb by Carden's method, sawing the bone through the condyles of the femur. The operation was followed by the greatest relief; his temperature fell, night perspirations and diarrhoea ceased, and appetite improved.

Matters progressed favorably till the 16th of July, or eight days after the operation, when in the afternoon the patient became chilly and very irritable, stump swollen, painful, and throbbing, followed by flushing of the face, dry tongue, heat of skin, and increase of temperature, with a quick pulse. These symptoms steadily became worse till 5 a.m. on the 17th, when hæmorrhage set in in the form of oozing of venous blood from under the edge of the flap; this continued at intervals notwithstanding elevation of stump, application of cold, and pressure till 10 a.m., when it was found necessary to place him under the influence of ether, break open the adhesions, and turn out coagula, with a view to discovering the source of the bleeding. No bleeding vessel could be found, the hæmorrhage coming from the surface of the stump and especially from the cancellated bone structure, as if it were forced out of it by pressure from behind.

The surface of the stump was freely exposed to the air, ice-bags placed in the immediate neighbourhood, but until a strong solution of perchloride of iron was applied the bleeding continued. The flap was now replaced, stump elevated, and all constrictions removed, after which, with the aid of 10 minims of tincture of opium, he passed into a quiet sleep, from which he awoke cool, pulse quiet, and no pain or throbbing in the stump; he was, however, very weak, and required a liberal amount of nourishment.

18th.—Report states, patient passed a good night and

is improved this morning. Ordered 10 minims of tincture of ergot three times a day with cool acid drinks.

19th.—At 9.30 last evening preceded by the same symptoms as occurred on the 17th. Oozing from the stump again appeared, when it was found necessary to open it up and apply the solution of iron, which with the application of ice and elevation of limb the bleeding ceased, and he passed into a quiet sleep from which he awoke refreshed.

20th.—No bleeding yesterday; but at 9 a.m. this morning, preceded by the symptoms as already described, oozing again set in, which continued so persistently notwithstanding active treatment, local and constitutionally, that it was feared the patient might sink from exhaustion; he was, however, kept up by the judicious administration of nourishment and stimulants, and he again passed into a quiet sleep, the hæmorrhage stopping.

21st.—At 5 a.m., preceded by the usual symptoms, oozing from the stump again appeared, when the solution of iron was applied, and dilute sulphuric acid and opium administered, but rejected by the stomach; the hæmorrhage, however, ceased as before.

22nd.—Patient passed a good night, but is very weak; the stump has a very unfavorable appearance, presenting to view a mass of black crusts of iron and blood, with a hæmorrhagic smell from it, and no attempt at suppuration.

23rd.—Symptoms of approaching hæmorrhage returned last evening, and notwithstanding the administration of ergot, acids, astringents, and opium, with elevation of stump and application of pressure, oozing set in at 12.30 a.m. this morning, and gradually increased until it was found necessary at 9 a.m. to apply styptics.

The condition of the man having now become alarming, being pale, almost exhausted and pulseless, and the hæmorrhage having presented the characters of periodicity, and bearing in mind that he had suffered from severe intermittent fever in 1873, I decided in consulta-

tion with Professor Longmore to try the effects of quinine, which I added in five-grain doses to the mixture of sulphuric acid and opium, but which his stomach at once rejected. The quinine was therefore given in a simple form with acid, 5 grains three times a day.

24th.—No hæmorrhage since yesterday morning; has taken 15 grains of quinine without any inconvenience. Appearance decidedly improved.

25th.—At 6 p.m. yesterday symptoms of approaching hæmorrhage again set in; temperature rose to $101\cdot7^{\circ}$, pulse 126, but at 9 p.m. instead of oozing from the stump he broke into a copious perspiration, after which he cooled down and passed into a natural sleep. From this time he steadily improved, but not without occasional recurrence of symptoms of approaching hæmorrhage, which having gone through its usual stages ended by action of the skin instead of oozing from the stump.

The quinine was continued, the stump soon threw off its blackened cap, healthy granulations sprang up and he rapidly recovered, adding two and a half stone to his weight. The blood from the stump during a paroxysm of hæmorrhage was carefully examined under the microscope, but nothing abnormal was discovered.

The patient's urine was rather dark coloured, specific gravity 1017, non-albuminous, alkaline; sediment calcareous, containing triple phosphates in abundance.

The attached temperature table will assist in demonstrating the periodic attacks of hæmorrhage:

Case of W. W—, 70th Regiment, æt. 22; service five years; amputation through left knee-joint; recovery.

1875.	Pulse.			Temperature.		
	a.m.	p.m.		a.m.	p.m.	
July 2	.	.	— ... 102 ...	—	...	100·6°
„ 3	.	.	96 ... 110 ...	97·8	...	100·6
„ 4	.	.	94 ... 100 ...	99·2	...	100·2
„ 5	.	.	94 ... 114 ...	98·4	...	101·
„ 6	.	.	96 ... 104 ...	98·4	...	100·8

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1875.		Pulse			Temperature.		
		a.m.	p.m.		a.m.	p.m.	
July 7	.	. 92	... 106	...	98°	... 100°	
" 8	.	. 95	... 106	...	98·2	... 98·8	Amputation at 10·30 a.m.
" 9	.	. 106	... 110	...	98·4	... 98·9	
" 10	.	. 107	... 114	...	98·6	... 99°	
" 11	.	. 102	... 116	...	98·6	... 99·8	
" 12	.	. 103	... 107	...	98·8	... 99·6	
" 13	.	. 105	... 116	...	98°	... 100°	
" 14	.	. 94	... 105	...	98°	... 99·2	
" 15	.	. 97	... 106	...	98·2	... 98·8	
" 16	.	. 98	... 114	...	98·2	... 101·6	
" 17	.	. 110	... 106	...	98·4	... 98·2	At 5 a.m. hæmorrhage in the form of oozing. Hæmorrhage at 9·30 p.m.
" 18	.	. 117	... 116	...	99·2	... 100·4	
" 19	.	. 118	... 124	...	99·2	... 101·4	
" 20	.	. —	... 110	...	—	... 101·2	Patient irritable, but no observation was taken; hæmorrhage at 9 a.m.
" 21	.	. 110	... 106	...	98·2	... 98·8	Hæmorrhage at 5·10 a.m.
" 22	.	. 102	... 122	...	98·2	... 101·8	
" 23	.	. 110	... 130	...	100°	... 100°	Intermittent hæmorrhage from 12·30 a.m. to 9·30 a.m.
" 24	.	. 116	... 126	...	98·4	... 101·6	
" 25	.	. 107	... 110	...	98·8	... 99·8	
" 26	.	. 102	... 108	...	98·4	... 99·8	
" 27	.	. 102	... 106	...	98°	... 99·4	
" 28	.	. 105	... 110	...	98·2	... 100·6	
" 29	.	. 106	... 108	...	98°	... 98·8	
" 30	.	. 99	... 102	...	98·2	... 98·6	
" 31	.	. 94	... 103	...	98°	... 98·8	