his medicine on January 30th to extract *hydrastis canadensis* fluidum, tincture hamamelidis, and ext. glycyrrhizae, as the haemorrhage was a little severe, and gave him morphine $\frac{1}{4}$ gr. hypodermically at bedtime.

The bleeding became less again and things seemed to go on favourably until February 12th, when at 11 a.m. without any cough or warning he had a copious haemorrhage which nearly filled a bedpan. He was very collapsed after it. I gave him morphine $\frac{1}{4}$ gr. hypodermically then, and afterwards $\frac{1}{4}$ gr. night and morning. For two nights before this haemorrhage the temperature rose to 102° F. in the evening. On February 17th I resolved to try the effect of suprarenalin, looking to the results obtained by Graesser,¹ Bird,² and Hedley,³ and I tabulate the routine treatment.

Suprarenalin (Armour and Co.)

February 17th, 5 p.m.	3j (1 in 5,000).	
" 18th, 1 a.m.	do.	... Slight bleeding morning.
" " 9 "	do.	...
" " 1 p.m.	do.	...
" " 6 "	do.	...
" " 12 night	do.	...
" 19th, 6 a.m.	do.	... Slight bleeding 11 p.m.
" " 12 noon	do.	...
" " 6 p.m.	do.	...
" " 12 night	do.	...
" 20th, 6 a.m.	do.	...
" " 12 noon	24 minims (1 in 1,000).	...
" " 6 p.m.	do.	...
" " 12 night	do.	...
" 21st, 6 a.m.	24 drops (1 in 1,000).	... Slight bleeding.
" " 12 noon	do.	...
" " 2 p.m.	5 drops do.	...
" " 4 "	do.	...
" " 6 "	do.	...
" 22, 2.20 "	10 do.	... About teacupful of haemorrhage 1 p.m.
" " 4.20 "	do. do.	...
" " 6.20 "	do. do.	...
" 23rd, 4 a.m.	do. do.	... Fatal haemorrhage 4.40 a.m.

During this time the sputum was more or less coloured, but there was very little cough and the temperature remained normal. Morphine $\frac{1}{4}$ gr. was given hypodermically night and morning to allay the cough, with the exception of the mornings of February 20th and 22nd. The fatal haemorrhage came on suddenly without warning and ended the scene in a few minutes. It was very copious, about half a basinful coming up. The treatment of the case beyond this included perfect rest in bed in the recumbent position, cool liquid food, ice to suck, regulation of bowels by salines and enemata, and avoidance of all excitement and talking.

REMARKS.

Suprarenalin in this case evidently did no good so far as the ultimate issue of the case is concerned. Indeed, owing to its raising the blood pressure its use seemed rather contraindicated than otherwise; still, after reading the results obtained and looking to the hopelessness of the case I felt justified in giving it a trial. That suprarenalin increases the blood pressure was evident from the marked extra tension in the pulse after administration. Twice when given frequently in one day I noticed profuse perspiration following its use. It did not interfere with the patient's digestion in any way, and gave rise to no discomfort of any kind. He always expressed himself as "feeling nothing" from taking it. Any little effect it had seemed to be more marked when the morphine was given at the same time. As to whether its exhibition delayed the final haemorrhage terminating the case I cannot say.

In this case evidently a large branch of the pulmonary artery must have ruptured, probably as the result of aneurysmal dilatation into a phthisical cavity, and probably medication of any kind would have proved ineffectual, but in less severe cases I should be inclined to try the results of suprarenalin again. After the first slight haemorrhage in this case I gave a hypodermic of ergotine, but as it made the patient feel very sick and faint I did not repeat it.

REFERENCES.

- ¹ EPITOME of the BRITISH MEDICAL JOURNAL, December 14th, 1903, par. 75. ² BRITISH MEDICAL JOURNAL, January 23rd, 1904, p. 191. ³ BRITISH MEDICAL JOURNAL, February 13th, 1904, p. 365.

A CASE OF HAEMOPHILIA TREATED WITH ADRENALIN CHLORIDE.

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On February 23rd, 1904, I was urgently summoned to see a patient who was said to have been bleeding from the mouth for about six hours. I found a young man, blanched and anxious-looking, his pulse too rapid to count, feeble and fluttering. A large quantity of coagulated blood was in a basin at the bedside and blood was being expectorated at frequent intervals.

The view of the mouth and pharynx being obscured by blood and blood-clot, a Gowan's gag and tongue depressor

was introduced and the pharynx and mouth cleaned out. It was then seen that there was deep purple ecchymosis of the right side of the hard palate, sharply limited by the middle line. The soft palate was engorged and oozing blood rapidly; the uvula was engorged, about $2\frac{1}{2}$ in. long, and bleeding freely. The uvula was seized by forceps and removed with scissors, the whole of the pharynx swabbed out with sponges saturated with adrenalin chloride solution (1 in 1,000) (Parke Davis), and a sponge saturated with the solution held to the stump of the uvula. On its removal, after several minutes all haemorrhage was found to have completely ceased. All the treated parts were completely blanched, with the exception of the ecchymosis on the right palate, which remained a dark purple and appeared extraordinarily sharply defined, presenting a striking contrast to the adjacent mucous membrane.

Adrenalin chloride solution πxv was given by the mouth. The urgent haemorrhage having been arrested, I had leisure to obtain the history of the case:

The patient was a male Hindu (Brahmin), aged 22. At the age of 12 years he received a blow on the right temple from a tennis ball. He bled from both nose and mouth for "several days afterwards."

At the age of 15 years he fell from a horizontal bar. He sustained no apparent injury, but on the following day began to bleed from the nose and mouth and to pass blood with both urine and faeces. This lasted five days. On the present occasion no blow or injury had apparently been sustained.

A puncture caused by a hypodermic injection was oozing freely. Adrenalin solution was applied to it, and no more oozing took place.

At 10 p.m. the patient vomited a large quantity of blood (probably swallowed earlier in the day). He passed a stool containing much black blood, and his urine was dark port-wine coloured. There had been no recurrence of bleeding from the mouth. There was a large, tender, and obscurely-fluctuating tumour in the right iliac fossa. The temperature was 98.4° F., and the pulse 134, regular, and much improved. The face was less anxious. He was ordered a mixture containing adrenalin solution πx and ergotinine citrate $2\frac{1}{2}$ gr. by the mouth every four hours.

February 24th, 7 a.m. Condition improved; no bleeding from mouth; appearance less anxious. Temperature 98.6° F.; pulse 118; urine black; faeces black. Adrenalin and ergotinine citrate mixture continued.

February 25th, 9 a.m. Much better. No external bleeding. Swelling in right iliac fossa less. Pulse 110, good; temperature 98.8° F.; urine clear, but slightly bloodstained; faeces black. Able to sit up in bed and talk. Adrenalin mixture discontinued, and full doses of iron and arsenic substituted.

February 26th, 9 a.m. Appearance very anxious; very restless; no external bleeding; urine port-wine coloured; has passed a copious stool consisting almost entirely of fresh blood; pulse 132, fluttering, and intermittent; breathing shallow and sighing; a hypodermic injection of ergotinine citrate $\frac{1}{10}$ gr. and strychnine $\frac{1}{10}$ gr. was at once given, and a rectal injection of 1 pint of saline solution at 100° F. The adrenalin mixture was again ordered by the mouth.

February 26th, 6 p.m. Face less anxious; breath fetid; pulse 135, non-intermittent; temperature 100.2° ; evacuation of the saline rectal injection stained black; urine clear, no visible blood; no external bleeding. Another saline rectal injection given and mixture continued.

February 27th. The patient became very restless, and his temperature rose to 103° F. on the night of the 26th. I was called to him at 2 a.m., and found him extremely restless, semi-conscious; temperature 104° F.; respiration very hurried and shallow; pulse 150, failing. At 2.15 a.m. the patient became completely unconscious, the pulse imperceptible, and the respiration more rapid and shallow. Respiration ceased at 2.20 but the heart continued to beat irregularly for nearly a minute afterwards.

REMARKS.

The patient's family being wealthy and high caste Hindu no family history was obtainable, nor for the same reasons was a necropsy possible. Had I at the time been aware of the patient's previous history I should not have removed any portion of the enormously enlarged uvula. It is of interest, however, that the bleeding from the stump was at once controlled, and that there was no recurrence of any haemorrhage from the pharynx.