

Table showing leucocyte counts and plasma proteins

Date	W.B.C. c.mm. (in 1,000)	Polymorpho- nuclear cell (%)	PLASMA PROTEINS (GRAMMES %)		
			Total	Albumin	Globulin
18-6-46	16.0	81	9.2	3.3	5.9
2-7-46	11.5	76	8.9	3.8	5.1
19-7-46	13.0	68	7.5	3.45	4.05
6-8-46	10.5	64	7.9	3.95	3.95
16-8-46	8.0	65	7.5	3.9	3.6

The general condition of the patient steadily improved and he gained 8 pounds in weight. There was no more rise of temperature, no sweating, and though the liver could be just palpated, there was no tenderness. A fluoroscopic examination showed absence of any upward enlargement and the movement of the diaphragm was fairly good. During convalescence he complained of a slight catchy pain and discomfort in the right iliac fossa. The cæcum and ascending colon which could now be palpated with ease were slightly thickened and definitely tender; so he was given a course of six 1 grain emetine injections along with enterovioform by mouth with relief of these symptoms. He was discharged from the hospital on 21st August and was followed up as an out-patient for a month, and during that period he kept very well indeed and gained 5 pounds more.

Discussion

Clinically and radiologically this was a typical case of amebic liver abscess. The faecal odour of the pus was due to secondary infection with anaerobic streptococci. Invasion of the liver might have occurred by portal infection, by direct spread from the adjacent structure, by blood-borne infection or by aspirations done outside before admission. The patient was seriously ill, and the general outlook seemed bad from the standpoint of therapy and prognosis. Considering the high fatality rate usually associated with surgical drainage mainly because of the unavoidable post-operative bacterial invasion of the abscess, and the value of the local penicillin therapy in such cases, it was decided to treat this patient by repeated aspiration combined with injection of penicillin locally and systemically. The result was so successful in this case that this method of treatment is recommended before considering open drainage in secondarily infected amebic abscess of the liver.

Our grateful thanks are due to Major Andreasen, I.M.S., Professor of Surgery, Medical College, Calcutta, for valuable suggestions.

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A NEW TREATMENT OF SCABIES

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WHEN it was discovered that a synthetic preparation which has been given the trade name phenyl cellosolve possessed marked sarcopticidal properties, the outcome was a natural desire to use it for the treatment of scabies, but before this was done it became necessary to determine any harmful side effects it might produce when applied to the skin of man.

Phenyl cellosolve* (monophenyl ether of ethylene glycol) is a liquid preparation, with an aromatic odour and has a bitter taste producing no tingling sensation of the tongue. It is mainly used as a solvent in industry. It is freely miscible with absolute alcohol and vegetable oil but not with mineral oil, e.g. liquid paraffin and kerosene oil. The oily mixture does not excite any appreciable irritation or burning when applied to a scratched or abraded skin. It is also well tolerated by babies and children. The oily mixture is innocuous to the eyes. It does not produce any ill effect when applied externally even over the whole body for days together.

Except for the treatment of pediculosis, it has not yet been employed for any other medical purposes. It can readily kill not only the adult louse but also the egg (Davis *et al.*, 1944; Hansens, 1945; Roy and Ghosh, 1947). When used for this purpose it is prepared with alcohol as follows:—

Phenyl cellosolve ..	5 per cent
Absolute alcohol ..	37.5 per cent
Water ..	57.5 per cent

When prepared with ground-nut oil it acts on the post-embryonic stages only and not on the eggs.

For the purpose of evaluating its action on *Sarcoptes scabiei* of man, the following methods were employed:

* We are particularly grateful to Messrs. Carbide and Carbon Chemical Corporation, manufacturers of synthetic organic chemicals, 30, East Forty-Second Street, New York 17, N.Y., U.S.A., for supplying us, free of charge, with a generous quantity of phenyl cellosolve.

(a) A minute drop of the oily mixture in groundnut oil was put on the freshly extracted mite placed on a glass slide and the excess of oil wiped off from its body with filter paper.

(b) The mite was released from the point of a needle on to the dorsum of the hand previously smeared very lightly with the oil. The mite was next removed to a glass slide as quickly as possible.

Only when all activities ceased, the mite was regarded as dead.

The results of tests carried out in the way stated above are shown below :

	Strength of the oily mixture	Duration of contact	Interval till death
Tests performed on glass slide.	5 per cent	15 seconds	12-18 minutes
	10 "	5-10 seconds	2-3 "
	15 "	5-10 "	Less than 1 minute.
Tests performed on hand.	10 "	15-30 "	1 minute
	10 "	1 minute	Immediate
	15 "	15-30 seconds	"

It will thus be evident that for destroying the mite on the body all that is necessary is to establish contact between the mite and the oily mixture (either 10 or 15 per cent) for a few seconds only. As a preliminary to this the burrows have to be opened and the mite exposed to the action of phenyl cellosolve and this is best done by scrubbing with soap and hot water while taking a bath.

Laboratory tests also reveal that for practical purposes the 10 per cent mixture can be regarded as efficient as the 15 per cent. We have therefore used the former in the treatment of all our cases.

This preliminary report includes the treatment of 35 cases of scabies amongst Indians only. Some of them were chronic cases suffering for more than a year. Many had thickened skin on the hands, axillary folds and inner surface of the thighs. Quite a large proportion of the patients treated had impetigo. The lowest age was 6 months. This was regarded as a particularly severe case. The highest age was 70 and the case had also a very severe type of the disease.

The following procedure for its use has been applied :

(a) Whenever possible a bath with soap and hot water was advised in the morning. Sometimes only sponging was done. Some outside patients had a very poor bath and did not take bath regularly.

(b) After drying the body, the oil was applied by means of cotton-wool over the entire body or over the affected parts only.

(c) Septic ulcers were cleaned and treated with the oil.

Only a little oil should be used as a thick application is not only unnecessary but also wasteful.

(d) The oil is applied again at night before going to bed and at any other time whenever there is itching. Scratching will cause the burrows to become exposed.

The oily preparation is quite stable and it is not necessary to prepare it fresh every time before use.

The details of treatment with the oily mixture of phenyl cellosolve will be published later when more clinical material has been obtained.

Phenyl cellosolve is marketed at a cost of \$0.76 per pound, f.a.s. New York. The cheapest vegetable oil available may be used for preparing the mixture.

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EARLY DIAGNOSIS OF TSUTSUGAMUSHI*

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EARLY diagnosis of tsutsugamushi (OXK typhus) often offers a serious problem to the clinician. The difficulty mainly arises in sporadic cases which are seen from time to time and in the first cases in an epidemic. This is because, firstly, no definite early clinical features of this disease have been described and, secondly, there is usually a striking general resemblance between tsutsugamushi and fevers of the dengue group as well as malaria. Of a series of 135 cases admitted to our hospital over 62 per cent had been diagnosed and treated as malaria for first 3 to 5 days before admission.

Most writers on scrub typhus emphasize that the diagnosis should be based on eschar, rash, adenopathy and Weil-Felix test. But a study of the table reveals that these symptoms may not be present according to some observers while their incidence according to others may vary greatly over a wide range.

Agglutination to OXK proteus strain in dilutions of 1 in 320 is considered by Stitt, Clough and Clough (1938) to be 'usually but not invariably diagnostic'. However, Megaw (1945) in his recent article on scrub typhus writes that 'occasionally reaction does not become positive till convalescence has set in. In patients who die

* Being a paper read at the Medical Section of the 34th Session of the Indian Science Congress.