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TREATMENT OF ACUTE DYSENTERY WITH A
COMBINATION OF SULFANILAMIDE PREPARA-
TIONS WITH STREPTOMYCIN

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Foreign Technology Division
Wright-Patterson Air Force Base, Ohio

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Block	Italic	Transliteration	Block	Ita.	Transliteration
А а	<i>А а</i>	A, a	Р р	<i>Р р</i>	R, r
Б б	<i>Б б</i>	B, b	С с	<i>С с</i>	S, s
В в	<i>В в</i>	V, v	Т т	<i>Т т</i>	T, t
Г г	<i>Г г</i>	G, g	У у	<i>У у</i>	U, u
Д д	<i>Д д</i>	D, d	Ф ф	<i>Ф ф</i>	F, f
Е е	<i>Е е</i>	Ye, ye; E, e*	Х х	<i>Х х</i>	Kh, kh
Ж ж	<i>Ж ж</i>	Zh, zh	Ц ц	<i>Ц ц</i>	Ts, ts
З з	<i>З з</i>	Z, z	Ч ч	<i>Ч ч</i>	Ch, ch
И и	<i>И и</i>	I, i	Ш ш	<i>Ш ш</i>	Sh, sh
Й й	<i>Й й</i>	Y, y	Щ щ	<i>Щ щ</i>	Shch, shch
К к	<i>К к</i>	K, k	Ъ ъ	<i>Ъ ъ</i>	"
Л л	<i>Л л</i>	L, l	Ы ы	<i>Ы ы</i>	Y, y
М м	<i>М м</i>	M, m	Ь ь	<i>Ь ь</i>	'
Н н	<i>Н н</i>	N, n	Э э	<i>Э э</i>	E, e
О о	<i>О о</i>	O, o	Ю ю	<i>Ю ю</i>	Yu, yu
П п	<i>П п</i>	P, p	Я я	<i>Я я</i>	Ya, ya

* ye initially, after vowels, and after ъ, ь; e elsewhere.
 When written as ѣ in Russian, transliterate as yě or ь.
 The use of diacritical marks is preferred, but such marks
 may be omitted when expediency dictates.

TREATMENT OF ACUTE DYSENTERY WITH A
COMBINATION OF SULFANILAMIDE PREP-
ARATIONS WITH STREPTOMYCIN

I. A. Vereshchagin and A. D. Ostrovskiy
(scientific supervision by Prof.
A. L. Libov and Senior scientific
colleague I. K. Lagert)

Beginning in 1941 sulfanilamide preparations were widely used to treat dysentery in children [1].

However, the appearance and spread of dysenteric bacteria resistant to sulfanilamides reached 63.7% in 1946 and 97.8% in 1950 [2]; this, together with successful application of the antibiotics streptomycin [3] and synthomycetine [chloramphenicol] [4] led to a sharp reduction in the use of sulfanilamides in treating dysentery.

This interruption in sulfanilamide therapy favored a growth in the number of strains of dysentery bacteria isolated from humans which are sensitive to sulfanilamides. Thus a study in 1962 of the sensitivity of 141 cultures to 4 antibiotics (levomycetin, chlorotetracycline, oxytetracycline, tetracycline, streptomycin) and to two sulfanilamides (A. D. Ostrovskiy) showed that the dysentery bacteria which were simultaneously resistant to 4-5 antibiotics were sensitive to sulfanilamides in 34.9% of the cases.

Considering this situation and also data [5, 6, 7] on the existence of synergism during simultaneous application of streptomycin and sulfanilamides, we have proposed a preparation called streptosulfanilamide, containing 1.0-130,000 units of streptomycin and 0.29 [g?] each of sulcimide, sulfamethazine, and norsulfazol. The daily dose is 0.2 [g?] per kg of body weight. The daily dose was given in four applications. The treatment was continued for 7 days.

A total of 110 children ranging in age from 6 months to 14 years were under observation. Ninety-six showed a mild form of the disease, 10 a moderately severe form, 3 a severe form, and 1 a toxic form. Bacterial confirmation was available for 57 patients. In 79 observed cases dysentery occurred without complications, while in 31 cases complications were present.

Streptosulfanilamide was given to 68 patients as the primary cycle of treatment, and to 42 after antibiotic therapy. One hundred six patients received 1 cycle of treatment, 2 received 2 cycles, and 2 received 3 cycles. The treatment was effective in 93 patients, including 19 which had undergone unsuccessful treatment with antibiotics in 3 cycles. No effect was obtained in 17 patients.

The normalizing influence of streptosulfanilamide on the complex of intestinal phenomena (frequency and nature of defecation) was manifested in the fact that after treatment 102 patients had a formed stool, 93 showed a normal coprogram, and in 109 patients the frequency of defecation was normal, while prior to treatment 72 patients had shown an impurity of mucus and 20 had demonstrated blood against the background of a pathological stool.

Sensitivity to sulfanilamides was determined by the method of paper discs on a special synthetic medium. The concentration

of norsulfazol in the discs was 7.5 µg and that of sulfamethazine was 15 µg. Study of the bacteriological clearance showed that after treatment bacterial excretion terminated in 50 out of 57 patients. In 3 patients bacterial clearance was accomplished over a period of 6 weeks from the beginning of treatment. This situation shows that streptosulfanilamide possesses expressed antibacterial action on the dysentery bacillus.

No toxic effect of streptosulfanilamide on the kidneys was detected.

The treatment was ineffective for 17 patients, of whom 11 simultaneously suffered from other diseases (coloenteritis-197, pneumonia, purulent otitis, lambliasis) while 3 showed expressed anemia and neutropenia; we found 1 patient who could not withstand the sulfanilamide preparations. The causes of the lack of effect are unknown for 2 patients.

Conclusions

1. Dysentery microbes are sensitive to sulfanilamide preparations to an amount of 36%.
2. Streptosulfanilamide (a combination of norsulfazol, sulfamethazine, and sulcicide with streptomycin) was 84% effective during treatment of dysentery in children.
3. Streptosulfanilamide is recommended for treatment of mild and moderately severe forms of dysentery in children.

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