tryptamine, a substance with antidiuretic properties, in extracorporeal circuits, with a simultaneously reduced urinary output, suggests that this substance may also play a part in the renal hæmodynamics of by-pass operations and major surgery in general. Also the liberation of adenosine triphosphate[4] has to be taken into account since this substance releases antidiuretic hormone from the posterior pituitary[14]. Clinical studies are in progress to clarify further the problem under consideration.

The 5-hydroxyindoleacetic acid was generously supplied by Upjohn Co., Kalamazoo, Mich.

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PATHOLOGY

Anti-Inflammatory Activity of Salicylate

Salicylate uncouples oxidative phosphorylation reactions[1], and the possible relation of this major action on cellular metabolism to other effects of the drugs is of great interest[2]. One of the most important properties of salicylate is its anti-inflammatory actions, both in rheumatic disease and in experimental inflammatory states[3]. Adams and Cobb[4] observed a general parallelism between uncoupling activity and the inhibition of erythema in the guinea pig by a series of non-hormonal anti-rheumatic drugs, including salicylate. They suggested a possible connexion between uncoupling ability and therapeutic activity but found that 2 : 4-dinitrophenol, which is a more powerful uncoupling agent than salicylate, failed to affect the erythema test. We have observed that salicylate, but not 2 : 4-dinitrophenol, also modifies the response to the passive cutaneous anaphylaxis test in the guinea pig.

In this test, the animals, after depilation, were given an intradermal injection of antibodies to pneumococcal type III polysaccharide, followed 24 hr. later by the intravenous injection of the antigen and pontamine blue. A progressive formation of œdema and leakage of the circulating dye then occurs in the areas of skin in which the antibodies have been injected. Animals given an intraperitoneal injection of salicylate (500 mgm./kgm. body-weight), 2 hr. before the injection of the antigen and dye, showed a reduced leakage of the circulating dye, but the area in which the extravasation of dye occurred was not changed. Similar treatment with 2 : 4-dinitrophenol (20 mgm./kgm. body-weight) had no effect compared to corresponding control animals.

These observations suggest that the anti-inflammatory action of salicylate, as exerted in the erythema and passive cutaneous anaphylaxis tests, does not result from an uncoupling action on oxidative phosphorylation processes and must be produced by another mechanism.

Full details of the experiments described above will be published elsewhere.

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Fate of Homologous Adult Spleen Cells injected into New-born Mice

During a series of experiments involving radiation chimæras, it became increasingly evident that it would be necessary to consider the results in terms of immunological tolerance of the actively acquired type. At the time a cytological marker was being used for tracing donor cells in the radiation chimæras, following the technique of Ford, Hamerton, Barnes and Loutit[1]. It was decided to use the same marker in tracing cells injected into new-born animals in order to determine, by a direct method, to what extent chimærism is a necessary adjunct to tolerance. There is considerable circumstantial evidence that this is indeed the case[2,3].

5×10^6 spleen cells of the *T6/T6* strain were injected intravenously into either *C*⁻ or *CBA* litters within 24 hr. of birth. In three cases *C*⁻ cells were injected into *T6* babies. At various time-intervals after injection, animals were killed and the spleens were prepared for cytological analysis by a modification of the technique of Ford and Hamerton[4]. Table 1 records the results of preliminary experiments. Injection of homologous adult spleen cells into the new-born animals resulted in splenomegaly and runting, a well-known phenomenon[2,5,6].

The rates of division in all spleens investigated, except that of the six-months-old animal, were abnormally high and there were other signs of an

Table 1. A Cytological Analysis of the Spleens of Animals Injected at Birth with Adult Spleen Cells, Chromosomally Marked

Donor	Recipient	Age of recipient in days, at death	No. of donor cells found	No. of host cells found
T6	*CBA*	4	0	22
T6	*CBA*	4	0	20
T6	*CBA*	6	0	73
T6	*CBA*	6	0	57
*T6**	*C*⁻	8	3	120
T6	*CBA*	10	0	367
T6	*CBA*	10	0	20
T6	*CBA*†	180	0	20
C⁻	*T6*	3	4	34
C⁻	*T6*	6	0	54
C⁻	*T6*	21	0	74

* Hyperimmune to *C*⁻
† Bearing a *T6* skin graft.