Gomal.Univ.J.Res.
Vol.6 No.1&2 pp 39-44 (1986)

STUDIES ON THE EFFECT OF SULPHASALAZINE (SASP) ON THIOLS

M. FARID KHAN
Department of Pharmacy, Gomal University, Dera Ismail Khan.

ABSTRACT

Intracellular thiols (LSH) and plasma thiols (PSH) are thought to have an important role in inflammation by protecting against damage to the tissues by oxygen derived free radicals. In the present investigation sulphasalazine (SASP) was added to red cell lysate, solutions of glutahtione (GSH) and albumin (AI-SH) and incubated for 1 hour in vitro. It was observed that thiol (LSH) present in the red cell was the main target of the action of SASP. It was also found that SASP has no effect on glutathione and albumin under these conditions. This early change in red cell thiols on addition of SASP suggestsa possible mode of action of this drug.

INTRODUCTION

Salicylazosulphyridine or sulphasalazine [2-hydroxy 5-{[(2-phyridinyl) amino] sulphonyl} azo] benzoic acid or salaz pyrin](SASP), was first introduced by svartz in 1941 [1] fr studies on a series of sulphonamide derivatives of the sal cylates. SASP is an acid azo compound of 5-aminosaxlicylic ac (ASA) and sulphapyridine (SP) with the structural formula, Fig Sulphasalazine (SASP) has recently re-emerged as a "second lin drug which alters laboratory indices of inflammation [2]. It unclear whether it is the SASP, or 5-ASA or one of their metab lites which is the active agent. However, it has been postulat that SASP has an affinity for connective tissue and thus has t ability to deliver its active ingredients to the requi sites [3].

Thiols in whole Blood is distributed in several fractio erythrocyte and plasma. Glutathione is the major component intracellular free thiol. It is thought to be important in protection of tissue damage caused by oxygen derived free ra cals (ODFR) involved in the inflammatory process [4,5]. plasma, most of the thiol(-SH) groups are on albumin which pl