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Comments on paper „Zwei Suchteste für Porphyrinen”

(Doss, M. & SCHMIDT, A., (1972) this j. 10 230—231)

(Eingegangen am 13. September 1972)

We must take exception to some of the statements in this paper about the use of the WATSON-SCHWARTZ-test (1) or qualitative EHRLICH reaction for porphobilinogen. Their references (8) and (9) cite the papers of WATSON and co-workers of 1961 and 1964 (2, 3). It should be emphasized that these described quite carefully a *modification* of the original WATSON-SCHWARTZ-test, which, despite our recommended precautions and modifications in the later papers (2, 3), is still carried out in many clinical laboratories in accord with the original technique (1).

As a matter of fact when this is used with care, making certain that sufficient sodium acetate has been added to give a negative reaction with Congo paper, the results are generally decisive, as with acute porphyria in relapse a strongly positive red violet reaction is regularly encountered, the color not being extracted by chloroform. False positive tests with the original WATSON-SCHWARTZ procedure are nearly always weak and atypical, the aqueous after CHCl_3 being a faint lilac, pink-violet, or brownish red. It was because of these that the above-mentioned modification was proposed and continues to be used with satisfaction.

It seems doubtful that the authors have had very much experience with this modification. They state that they used the WATSON-SCHWARTZ-test with and without butanol but give no results relating to this difference, and do not indicate whether the butanol was used alone or after CHCl_3 , as preferred. (This, of course, is unnecessary if the aqueous is colorless after CHCl_3 alone.) Nor do they mention the important necessity of testing samples in question with 22% HCl (w/v) to exclude compounds such as methyl red, beet pigment, or certain melanogens (3) alone. The authors quote STEIN and TSCHUDY (4) who stated that "75% of the patients referred to us in recent years because of the suspicion of acute intermittent porphyria and usually positive WATSON-SCHWARTZ-tests as well have been found not to have abnormal porphobilinogen excretion as measured by column chromatography". They

prefaced this comment, however, by emphasizing that „qualitative demonstration of porphobilinogen by the EHRLICH aldehyde reagent (2) requires detailed knowledge of the limitations of this test for proper interpretation“.

Here they had in mind the above-mentioned modification of the WATSON-SCHWARTZ-test and the necessary precautions in its use. Their statement respecting the 75% of patients, as given above, was only intended to imply that the test had not been properly carried out or interpreted. Obviously such errors or lack of understanding ought not be used to consign the test to oblivion, as tacitly recommended by Doss and SCHMIDT. It seems to us that in condemning the test as they have done, exact statistics of this type ought to be given as to the foregoing factors.

We are fully aware of the value of the MAUZERALL-GRANICK resin method and of course we use this not only for diagnosis but to follow the porphobilinogen and δ -aminolevulinic acid excretion quantitatively. At the same time, anyone who has had reasonable experience with the above-mentioned *modification* of the original WATSON-SCHWARTZ-test, knows that it can be used quite reliably in the diagnosis of acute porphyria and that it often saves a great deal of time. In our hands, at least, it has frequently permitted immediate and convincing diagnosis. It would be unfortunate to discard a useful, inexpensive procedure which many clinical laboratories have employed to excellent advantage and which we believe very reliable when properly used.

Clinical laboratories are often unable or unwilling to carry out the resin method on an emergency basis, at night or over the week ends, even if they are prepared to carry it out at all. Often in cases of acute intermittent porphyria or variegate porphyria in neurologic relapse, the history plus a positive modified WATSON-SCHWARTZ-test, permits early diagnosis and institution of treatment. This may prove of the utmost importance as it is distinctly possible that hematin intravenously

may ameliorate or even abolish the attack, though this must now be determined. A recent paper has at least revealed how rapidly the induction of δ -amino-levulinic acid synthetase may be repressed in this

way (5). We would not hesitate to commence administration of hematin, on the basis of a typical or at least suggestive history and physical findings plus such a positive test.

References

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