

the indicated treatment in our clinic, a population in which the average full scale IQ is 83 and the average patient cannot grasp the simile and metaphor needed to operate in an analytical mode (Weiner & Lovitt, 1984).

We commend Dr Holmes for speaking out on behalf of supportive psychotherapy. We assert that it is a full sibling of analytical therapy and not an impoverished distant relative. A dynamic understanding of patients is just as important in supportive therapy. Therapists use that understanding to help foster adequate coping by direct means, through various teaching techniques, modelling and advice-giving. These are not non-specific aspects of psychotherapy: they have their specific indications and contraindications. As noted above, supportive therapists must also be cognisant of transference and the other manifestations of unconscious mental process; not to bring them to the patients' consciousness, but to use that awareness to shape the therapeutic interaction for the patient's greatest benefit.

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References

- WERNER, D. S. (1984) *The Practice of Supportive Psychotherapy*. New York: Brunner/Mazel.
WEINER, M. F. (1986) *Practical Psychotherapy*. New York: Brunner/Mazel.
— & CROWDER, J. D. (1986) Psychotherapy and cognitive style. *American Journal of Psychotherapy*, **40**, 17–25.
— & LOVITT, R. (1984) An examination of patients' understanding of information from health care professionals. *Hospital and Community Psychiatry*, **35**, 619–620.

Calcium and Extrapyrimal symptoms

SIR: It has been suggested that serum calcium ion levels may predict both the onset and occurrence of extrapyramidal symptoms (EPS) (Alexander *et al.*, 1979; El-Defrawi & Craig, 1984) and more recently Fernando & Manchanda (*Journal*, May 1988, **152**, 722–723) reported on their successful treatment of EPS with calcium in two patients. We wish to report the findings of an investigation into the relationship between severity of EPS and serum calcium levels in a population of patients on neuroleptic medication.

We studied all patients admitted into an acute psychiatric ward over a six-month period, who in addition had been on a neuroleptic agent for at least

three weeks. We also included patients attending a depot clinic at a day centre serving the same geographical area as the acute psychiatric ward. All subjects were rated on the Simpson-Angus Neurological Rating Score (Simpson & Angus, 1970) and blood was obtained for calcium estimation at the same time.

Forty-nine subjects were studied, comprising 21 females and 28 males. The mean age was 44.0 years (s.d. = 16.0 years). The mean total duration of neuroleptic use was 81.79 months (s.d. = 66.40 months) and mean current duration of neuroleptic use 28.64 months (s.d. = 43.82 months). The mean current daily neuroleptic dose (chlorpromazine equivalent) was 338.29 mg (s.d. = 512.31 mg). Twenty patients were on both neuroleptic and anti-cholinergic agents. Thirty-six (73.5%) patients had the diagnosis of schizophrenia. The Kendall rank correlation coefficient between calcium levels and scores on the Simpson-Angus scale was -0.10 ($P=0.28$).

In this study, no significant relationship between calcium levels and severity of EPS was demonstrated. It may well be that no simple direct relationship exists. El-Defrawi & Craig (1984) suggested that it was the relative changes in the levels of calcium in the individual patient that predicted EPS, i.e. that decreasing calcium levels in the presence of neuroleptics predicted onset of EPS. There is an obvious need for further work to clarify their report.

The occurrence of EPS depends, among other things, on the pharmacological structure and dosage of administered neuroleptics and also on the concomitant use of anticholinergic agents. In addition, age, sex, and individual predisposition are all factors of importance. Thus these factors would have to be accounted for in any future studies.

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References

- ALEXANDER, P. E., VAN KAMMEN, D. P. & BUNNEY, W. E. (1979) Serum calcium and magnesium levels in schizophrenia. *Archives of General Psychiatry*, **36**, 1372–1377.
EL-DEFRAWI, M. H. & CRAIG, T. J. (1984) Neuroleptics, extrapyramidal symptoms, and serum calcium levels. *Comprehensive Psychiatry*, **25**, 539–545.
SIMPSON, G. M. & ANGUS, J. W. S. (1970) A rating scale for extrapyramidal side effects. *Acta Psychiatrica Scandinavica*, **Suppl.** **212**, 11–19.