Dexamethasone Suppression Test in the Management of Depression

Dear Sir,

The endeavour to develop laboratory tests to aid diagnosis and management in psychiatry has been relentless, but often unrewarding. Of all the biological markers investigated, the Dexamethasone Suppression, investigations that culminated in its introduction as a highly specific diagnostic test for melancholia (endogenous depression). There have been hundred of studies involving thousands of patients on its diagnostic utility, usefulness in management and as a paradigm to investigate the patho - physiology of depressive illness. This world literature has been critically reviewed. In a previous leading article in the British Medical Journal titled 'The psychiatry the DST was prematurely evaluated with other biological albeit less promising markers to have a limited value as a laboratory test for the diagnosis or therapeutic difficulty, however, the laboratory data may provide valuable additional information.'

Numerous studies have been carried it in recent years and extensive clinical experience has accumulated to warrant a new appraisal of its current status in psychiatry. This task has been undertaken by the American Psychiatric Association Task Force on Laboratory Tests in Psychiatry. The Task Froce reported its assessment of the world literature covering aspects of the DST methodology, diagnostic value including its specificity and sensitivity and its usefulness in the short and long term management of depression5. In its appraisal, the Task Force reviewed the world literature, and based its conclusions on studies that 'adhered to reasonable scientific standards' without spelling out what these 'standards' are although they refer to 'ideal criteria' such as the use of consistently defined samples, random assignments, appropriate control subjects and double - blind methodology. This selectivity could not be extended to their evaluation of studies of the DST as a predictor of relapse as most of the reports were uncontrolled observations and case reports. The conclusions of the overview were that the DST has limited sensitivity (percentage of patients with positive or abnormal results about 40 - 50% for major depression, but high specificity (percentage of individuals free from depression who have negative or normal results of 90% in healthy normal controls. Sensitivity of the test varied and was higher (about 60 - 70%) in very severe , especially psychotic affective disorders including major depression with psychotic features, manic and schizo-affective disorders Its specificity was lower in patients with minor affective disorders (70-80%) and is lowest in mania, acute psychosis and dementia (50-55%).

The test, however, has satisfactorily high specificity in patients with chronic schizophrenia, anxiety disorders, grief reaction, chronic pain, stroke and detoxified alcoholic patients. As regards its usefulness in management, the DST was found to have effectively no value for predicting short-term response to antidepressants or elector convulsive therapy: non - suppressors respond well

in 67% of cases versus a response rate of 64% in suppressors. Worthy of note, however, that favourable responses to placebo amongst non-suppressors were less likely to respond to cognitive therapy than suppressors. The value of the DST in predicting long-term outcome was assessed on the basis of ten reports of uncontrolled observations and case reports of uncontrolled observations and case reports of uncontrolled observations and case reports out of which seven reports allowed a statistical review. All 111 depressed patients studied in these reports were non-suppression initially and 79 (63%) of these patients relapsed or became suicidal converted to normal suppression during treatment or at follow-up and 41 (37%) continued to fail to suppress even after apparent clinical recovery. 44 (40%) of theses patients relapsed or became suicidal during several weeks to six months follow-up, 12 of whom became suppressors and 32 persisted with non-suppression. This indicated that among patients who became suppressors, only 17% (12 out of 41) of those who persisted with non-suppression indicating that failure to convert to normal suppression is a poor progostic sign and is predictive of relapse or suicide in these patients. Methodological aspects and the influence of non-specific factors were also considered. The degree of stress/distress e.g. effect of admission to hospital, withdrawal of psychotropic medication, increased age, presence of severe weight loss and the bioavailability of dexamethasone are important parameters to consider in evaluating its diagnostic and prognostic utility, but do not appear to account for the occurrence of non-suppression.

Since the Task Force has submitted its report for publication, the W.H.O. world collaborative study on DST was reported6. In this study the DST was carried out on 543 patients with major depression from eleven countries including developing countries. The results showed considerable variation in rates of non-suppression despite the use of the same diagnostic criteria and DST procedure. The majority of centres, however, reported significant difference in rates of non-suppression between depressive patients and normal controls suggesting the usefulness of a DST as classificatory aid in diagnosing depression.

In conclusion the DST has been shown to be one of the most reproducible findings in the search for biological markers for depression. The balance of evidence indicates that the DST has limited overall diagnostic valuem, but may be particularly useful in diagnosing biological depression in clinical settings where depression is highly likely to occur, yet difficult to diagnose reliably, such as in patients with chronic schizophrenia, anxiety disorders, grief reaction, detoxified alcoholic patients and patients with chronic pain and following stroke. It has no value in predicting acute response to antidepressive therapy but provides a useful monitor to clinical progress and is a good predictor of long-term outcome: continued non-suppression or reversion from suppression to non-suppression during treatment and follow-up is an ominous sign that indicates a greater risk for relapse in the months following treatment. It should be, however, emphasized that it is only an aid to diagnosis and progonsis, aspects which

should be essentially based on careful clinical assessment. The DST result could provide a 'physical sign', indicating biological derpression, enhancing the diagnostic confidence but should never replace careful clinical assessment. The presence of this 'physical sign' would indicate the necessity for vigorous physical treatment or at least the use of a combined physical - psychological approach in these conditions.

Moreover, patients who fail to suppress or have converted from normal suppression to non-suppression are likely to relapse following recovery and require more intensive follow-up and continuation on maintenance or prophylactic medication. The test may be useful in determining when to discontinue medication: continuing non-suppression may reflect continuing vulnerability or activity of the illness in spite of apparent recovery and medication would only be discontinued if the DST results changes to normal suppression. For its use in clinical practice, it is important to assess the presence of confounding non-specific factors and interpret the presence of this 'sign' accordingly in guiding diagnosis and prognosis.

Refernces

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Subjects of M.Sc. and M.D. Theses Currently Registered in Psychiatry Departments, (July 1992)

In this section, the currently registered theses which are under investigation in different academic centers in Egypt will be presented as a service for interested colleagues. We hope that, by establishing this section, authors and colleagues are invited to supply the editorial board with appropriate scientific information that could help to disseminate knowledge about various research in Egypt. This will facilitate communication and might diminish repetition. Ideas for this sections are welcomed together with any appropriate or useful ideas.

Alexandria University.

A) *M.Sc. Theses:*

1- Childhood depression and its relation to scholastic achievement .
2- A study of serum cortisol level in suicidal persons.
3- Uses of psychotropic drugs among non-psychiatric patients in health insurance hospitals in Alexandria.
4- Positive & negative symptoms in schizophrenia.
5- Personality disorders among a sample of outpatients in Alexandria.
6- Personality dimensions among Alexandria university students attending. Psychiatric, & medical / surgical outpatient clinics.
7- Behaviour and nutrition among attention deficit disorder children.
8- Clinical and psychometric study among divers.
9- A study sample of children of schizophrenic parents.
10- Minor tranquilizer in general medical practice.

B) M.D. Theses:

1- Epidemiological, biochemical & phenomenological study of obsessive compulsive disorders in Alexandria.
2- Psychodynamic & psychometric study of bronchial asthma in children.

Al-Azhar University.

A) M.Sc. Theses:

١ – دراسة العلاقة بين تغيرات تخطيط الدماغ الكهربائى وتخطيط القلب الكهربائى عند كل من مرضى الصرع ومرضى القلب.

٢ – دراسة الصداع فى الأطفال دون السابعة.

٣ – ارتفاع نسبة السكر بالدم فى مرضى السكته الدماغية.

٤ – دراسة قرح القناه الهضمية فى المرضى المصابين بالسكته الدماغية.

٥ – تغيرات تخطيط كهربائية للدماغ فى نوبات الصرع الكاذب.

٦ – دراسة انتشار مرضى الاكتئاب لدى المراهقين المصريين فى منطقة حضرية.

٧ – الأمراض والاضطرابات الاكتئابية بين المترددين والمترددات على عيادة شامله بالتأمين الصحى.

B) M.D. Theses:

١ – العلاقة بين سلوك التدين وبعض مؤثرات الصحة النفسية لدى عينة من الشباب المصرى المسلم.

٢ – دراسة ميدانية اجتماعية عن انتشار الاضطراب النفسى بين الأطفال اليتامى فى القاهرة.

٣ - دراسة مسحية عن انتشارية الاضطرابات النفسية بالمنطقة المحيطة بمستشفى الحسين الجامعي.

٤ - دراسة علاقة حدوث الانتكاس بالتعبير الانفعالي الاسري في عينة من مرضى الفصام.

٥ - دراسة سيكوباثولوجية مقارنة للاضطرابات الذهانية في مرضى جنسين مختلفين.

٦ - دراسة طب نفسي لاتجاهات مرضى المراحل النهائية تجاه الموت.

٧ - دراسة غير ثقافية لعينة من مرضى اضطراب الوجدان من سن المراهقة بحيث يكون الشباب من المصريين والسعوديين.

٨ - مدى ملائمة العلاج بالسيكودراما لمرضى الاضطرابات النفسية العصابية.

٩ - استخدام الجماعة التفاعلية كوسيلة للتثقيف الصحي بهدف الوقاية من انتشار الادمان.

١٠ - دراسة وصفية تحليلية لعينة من المدمنين الذين يعالجون باحدى المستشفيات الخاصة.

١١ - دراسة حضارية مقارنة للاعتماد على المخدرات والعقاقير على عينتين من المتعاطين في كل من دولتي البحرين وجمهورية مصر العربية.

١٢ - دراسة مقارنة لمرضى الاكتئاب في مصر والسعودية.

١٣ - دراسة اكلينيكية وبائية للاضطراب الاكتئابي لدى سكان احدى القرى المصرية.

١٤ - التعبير الانفعالي داخل الاسرة وعلاقته في تتابع وانتكاس المريض في عينة من مرضى الادمان من المصريين.

١٥ - أثر الهجرة المؤقتة كفرص العمل لعينة من المصريين العاملين بالسعودية حالتهم النفسية وأثر الهجرة.

١٦ - مؤثرات الاستجابة للعلاج بالصدمات الكهربائية.