The Treatment of Obsessive-Compulsive Disorder in Adolescence A Report of Fifteen Cases

DEREK BOLTON, SUZANNE COLLINS and DEREK STEINBERG

Summary: The treatment of 15 adolescents with obsessive-compulsive disorder is described. Treatment was in most cases primarily behavioural (response-prevention), with the family involved in the therapy. Other components of treatment which were used in some cases are also described: medication, psychotherapy, and 'milieu' therapy. Outcome after treatment was generally good, with symptoms in most cases being relieved entirely or reduced to a mildly incapacitating level. Treatment gains in most cases were maintained at follow-up. Obstacles to treatment are noted, and recommendations are made as to the management of the disorder in adolescence.

Revising the traditional criteria (Schneider, 1925; Mayer-Gross et al, 1969) in the light of a detailed phenomenological study, Stern and Cobb (1978) define obsessive-compulsive neurosis as consisting of "either ruminations (or ideas) which are psychic phenomena recurring in spite of the patient regarding them as alien and absurd and/or voluntary motor actions which are reluctantly performed despite their being regarded as alien and absurd". The incidence of the disorder in the adult psychiatric population has been estimated at approximately 2 per cent (Pollit, 1957; Ingram, 1961; Black, 1974), and in the child/ adolescent psychiatric population at between 0.2 and 1.2 per cent (Judd, 1965; Hollingsworth et al, 1980). Adolescence is a particularly important period in the development of obsessive-compulsive neurosis, with the age of onset below 25 and in the teenage years in approximately two-thirds of adult cases (Pollit, 1957; Kringlen, 1965).

Notwithstanding considerable differences in formulation and emphasis, there is a measure of agreement among clinicians as to the nature of obsessivecompulsion. In particular, symptoms are regarded as serving to relieve high anxiety by active strategies which are irrational, (in contrast to the passive avoidance characteristic in phobias). Less negatively, the strategies have magical qualities, relying heavily on symbolism, ritual, and the power of thought over reality (Freud, 1950; Fenichel, 1946; Carr, 1974; Rachman and Hodgson, 1980).

Treatments of the disorder have included psychosurgery and medication (notably clomipramine), as well as different types of psychological therapy (for a recent review of these treatments see Rachman and Hodgson, 1980). The behavioural methods of response-prevention have shown notable success in the treatment of the disorder in adults (Marks *et al*, 1975; Rachman *et al*, 1979).

In spite of the importance of the adolescent period in the development of obsessive-compulsive neurosis, the literature on the treatment of the disorder in adolescence is relatively limited. Following early clinical reports (Lewis, 1936; Warren, 1960), there have been a number of treatment studies of adolescents, and of mixed groups of children and adolescents; for example, Adams (1973) reported on individual psychotherapy, and Rapoport et al (1980) reported on the use of clomipramine. The methods of response-prevention have been less well studied in adolescents than in adults, there being only a few casereports published (Hallam, 1974; Friedmann and Silvers, 1977; Green, 1980; Horne et al, 1981). A typical factor which distinguishes the presentation of obsessive-compulsive disorder in the adolescent from that in the adult is the adolescent's tendency to involve parents in rituals. For this reason, behaviour therapists treating adolescents and children have encouraged parents to participate in response-prevention (Fine, 1973; Green, 1980; Stanley, 1980).

In this paper we describe the treatment of 15 adolescents with obsessive-compulsive disorder, their outcome, and the results of treatment at follow-up. Treatment was primarily behavioural, where possible, and the families were engaged in the therapy.

Method

The adolescents were in- or out-patients at the Adolescent Unit of the Bethlem Royal and Maudsley

Hospitals between 1977 and 1981. All patients with a primary diagnosis of obsessive-compulsive disorder seen during that period were included. Of course, the cases presented here are subject to the general referral characteristics of the Unit. Most of the adolescents were not referred directly by general practitioners, but had already had varying types and amounts of treatment at child guidance clinics or other hospital departments. Therefore the cases represent the more severe end of the spectrum of the disorder, as it presents in adolescence. The information presented here on patient characteristics, treatment and outcome was collected in some cases retrospectively, and in others, during active involvement with the child. In all cases, at least one of the authors was actively involved in management and treatment.

Three cases have been reported elsewhere: case 14 in Clark *et al* (1982), and cases 10 and 11 in Bolton and Turner (in press). Four further cases (1, 5, 6 and 15) are described in the Appendix.

Results

Patient characteristics

In this section we give information on sex and age at referral, presentation and examination (symptomatology, family involvement in symptoms, phenomenology, and intelligence), age of onset, severity at referral, and on peer relationships and schooling. Some of this information is presented in Table I.

Presentation and examination

Symptomatology: there is a scatter of two main kinds

of compulsion: checking and cleaning. The term checking is used here in rather a broad sense, to include not only e.g. returning to check that no damage has been done, or that an action has been carried out, but also various "safe-making" rituals, such as organizing things in the bedroom in a certain way before sleeping, or dressing in a certain order. Compulsions are sometimes combined with ruminations. This does not simply mean the occurrence of irrational beliefs in connection with irrational acts ("I have to wash repeatedly to get rid of germs", or, "I have to do it this way to avoid something dreadful happening later"), which were present in all cases, but in addition, preoccupation with e.g. guilt or impending disaster, which was continuous and intrusive enough to be distracting and incapacitating. One child (case 14) presented with primary obsessional slowness (Rachman 1974). Family involvement: in all cases the family was involved in the child's rituals; sometimes one parent was involved (in which case, mother), sometimes both, sometimes siblings too. The nature and extent of the involvement varied, from relatively mild, such as occasional periods when the child made repeated requests for reassurance; (cases 9 and 12), through demands for cooperation in rituals daily for several hours (in many cases); to extreme, in which the child dominated practically every action in the home, by shouting instructions and throwing violent tempers if family members hesitated to obey (e.g. cases 10, 11, and 15). Naturally such involvement caused much misery and anger in the family, though there was rarely physical violence, and

Patient characteristics										
	Sex	Age at referral		Symptomatolog	A so of	Soucrity of				
Case			Checking	Cleaning	Ruminations	Age of onset	Severity at referral			
1	F	15	+	+	+	13	3			
2	F	18	+	+	-	13	2			
3	М	15	+	+	+	14	2			
4	F	13	+	_	-	12	3			
5	М	12	+	+	-	12	2			
6	М	16	+	+	+	14	3			
7	F	14	+	-	+	13	2			
8	F	12	+	+	+	11	3			
9	F	14	+	-	+	11	1			
10	М	14	-	+	-	13	3			
11	М	14	-	+	-	9	3			
12	М	14	+	-	+	14	2			
13	М	16	-	+	-	13	2			
14	M	12	Overall slowness			5	3			
15	F	12	+	+	_	11	3			

TABLE I

Severity scores: 0 = no symptoms; 1 = symptoms present for less than an hour a day; 2 = symptoms present for between one and four hours a day; and 3 = symptoms present for more than four hours a day.

when that recurred, it was mild. There was usually conflict between the parents; often over how to manage the child. Phenomenology: most were reported to be of nervous disposition, and all of the children were markedly anxious on examination. Resistance to rituals was evident at interview, clearly and reliably, in about half the cases. It is now recognized, however, that this feature is less common in adult obsessive-compulsion than previously supposed, and certainly not common enough to be a defining characteristic of the disorder (Stern and Cobb, 1978). In four cases (1, 7, 10, and 12) there were clear signs of clinical depression during some periods, and in two (10 and 11) there were features of conduct disorder. Intelligence: the children were of average or above average intelligence, except for one (case 10) of low average ability. Estimates were based on formal testing or on school reports and attainments.

Severity at referral

Here, the severity of the obsessive-compulsive symptoms is based on the degree of disruption to normal activities caused by the symptoms. Severity is measured by the amount of time during the day (in hours) in which the symptoms dominate behaviour. The categories of severity are referred to in the text as follows: symptom-free, mild (less than one hour), severe (between one and four hours), and very severe (more than four hours). Assessment of severity at referral was based on reports from parents and child, and usually also on reports from the referring agency.

Peer relationships and schooling

The soundness and extent of peer relationships tended to vary inversely with the degree of general disturbance in the child's development and personality, rather than with the severity of symptoms at referral. Some of the children had hardly settled into a peer group or into school (e.g. cases 11 and 14). Many were loners but had managed to mix sufficiently, at least in school. Others (e.g. cases 3, 6 and 12) were relatively well-established in peer groups. In all cases, however, marked deterioration in symptoms led to social withdrawal. As to schooling, intermittent or total school-refusal usually was associated with all but the mildest obsessive-compulsive symptoms. Occasionally, anxiety about school and subsequent schoolrefusal seemed to have been a major factor in the development of the child's obsessive-compulsion (cases 5 and 7). But in most cases difficulties with school appeared to be a result rather than a cause of the disorder.

Treatment

In this section we describe response-prevention and

family therapy, and then other components of treatment: medication, psychotherapy, and milieu therapy in in-patients.

Response-prevention and family therapy

All but two cases (5 and 12) had already had outpatient treatment prior to referral; and three (cases 3, 14 and 15) had also had admissions to child psychiatric units. If the presenting problem was apparently resistant to out-patient work on assessment, admission was offered. Otherwise, out-patient work was attempted. The first choice of treatment for out-patient work was generally self-imposed response-prevention, with self-monitoring of symptoms and their (hoped for) decline. This would be more likely to work in cases where the symptoms were not severe or pervasive, and the child was strongly and consistently motivated to change. However, given the relative chronicity of our group, these optimal conditions were rarely satisfied. Usually concurrently, attempts were made to engage the parents in response-prevention, either passively (by refusal to participate in the child's rituals, in effect preventing their own responses and therefore the child's), or actively (by restraining the child from compulsive behaviour, verbally, or, with the younger adolescents, physically). These directives implied that there would have to be a reorganization of the parents' authority, and an increase in their tolerance of the child's distress and anger. Methods of facilitating such changes included instruction and modelling; the setting of specific tasks in, and out, of sessions, and the modification of invalid beliefs. Beliefs such as that the child might come to harm, or even die, if left unattended in distress; or that the father might suffer cardiac arrest, or might damage the child, if he confronted the child's anger with his own. However, in severe cases, like the majority here, these methods by no means guarantee the achievement of new behavioural patterns, e.g. the exercise of joint, consistent and effective parental authority.

If out-patient work was unsuccessful, admission was then recommended. On admission, symptoms sometimes stopped, but they invariably returned within days or weeks. Response-prevention was again the main treatment, though two of the children refused to participate consistently in such a programme (cases 11 and 15). If self-imposed prevention with monitoring produced no effect, the staff imposed external control. For example, the child would be allowed a normal amount of time to wash and dress in the morning (and therefore not enough time for rituals), at the end of this period he either allowed himself to be taken to breakfast, or he missed breakfast (later he would be given "Build-up" to ensure sufficient calorie intake). Artificial exposure was generally unnecessary since most of the children already felt anxious and inclined to compulsive behaviour in the course of daily routine e.g. after touching door handles, or using the toilet. Where artificial exposure was used (as in cases 3, 4 and 10), contact with feared objects was graded according to experienced anxiety. Generally we have not used flooding, i.e. prolonged exposure to highly feared stimuli, with complete (or near complete) response-prevention. The children were usually not self-assured or motivated enough. On the one ocasion the method was used, the effects were dramatic (case 10, reported in Bolton and Turner, in press).

During admission the children spent weekends at home and the families attended for therapy weekly, or fortnightly. The main issues and methods of therapy were similar to those in the out-patient phase, with the further aim of generalizing any improvement on the ward into the home. It should be added here that while family therapy tended to focus primarily on issues of control, and toleration of distress and anger (relevant to response-prevention), it frequently tackled other family dynamics which appeared relevant. Insofar as the child's obsessional fears have a symbolic meaning, the underlying anxiety may concern sexuality, growing up and separation. These and related issues are of course common in family therapy where the adolescent is the identified patient.

Other components of treatment

Medication: clomipramine was used only once for obsessive-compulsive symptoms, when other approaches were making little progress; but no change resulted (case 15). Clomipramine was, however, used several times for associated depression and anxiety, in three cases successfully (cases 1, 10 and 12); and in one case with uncertain results (case 11). In case 12, the relief of depression led to decrease in the intensity of obsessional rumination and subsequently to decrease in compulsive behaviour. *Psychotherapy:* in most cases an attempt was made to engage the child in a consistent therapeutic relationship (loosely "psychotherapeutic"), to support the child in behaviour therapy during admission. In two cases (14 and 15) the aim was to draw the child out of a relatively isolated state, and was not concerned immediately with the obsessivecompulsive symptoms. None of the children, however, received psychodynamic psychotherapy on the Unit. One had previously had psychoanalytic therapy (case 11), and another (case 10) had been assessed for psychotherapy at a child guidance clinic and found unsuitable. The few assessments for psychodynamic psychotherapy made on the Unit did not reveal indications for such treatment. It may be noted, however, that both ward management and family therapy placed emphasis on simplicity, clarity and correct identification of feelings, and that these have been recommended as important principles in psychotherapy with obsessive-compulsive children (Adams, 1973). These features of management are of course connected also to the next topic. "*Milieu*" therapy: during admission the children had the opportunity to mature in their daily interaction with staff and peers. In most if not all cases the therapeutic milieu of the Unit (ward and school) had a marked beneficial effect in encouraging the child's resolve and ability to resist and replace his obsessive-compulsive strategies, as well as encouraging maturation in general.

Outcome and follow-up

Outcome after treatment was assessed by observation on the ward (in cases of admission) and/or by parental reports on behaviour in the home. "Treatment" here refers primarily to response-prevention and family therapy as described above, though it must be remembered that the other methods of treatment described were sometimes used concurrently, and also that two of the children refused to participate consistently in response-prevention (cases 11 and 15). Follow-up assessment was by interview with child and parents, either in person where possible (eight cases), otherwise by telephone (five cases); in one case (15) the parents declined to be interviewed (or to allow the child to be interviewed), and one case (14) is still in treatment. Table II presents duration of out-patient treatment (by this Unit), duration of admission, severity at referral (repeated from Table I), after treatment, and at follow-up; time of follow-up after the end of treatment is also given. All times are in months. The coding for severity of obsessive-compulsive symptoms is as for Table I. Follow-up in case 3 was occasioned by re-referral after relapse; the young man was referred on to an adult psychiatric department where further treatment by exposure and responseprevention led again to recovery. Initial follow-up in case 1 was also occasioned by relapse and re-referral, leading to re-admission; the two periods of treatment are shown separately in the Table.

As can be seen from Table II, thirteen out of the fifteen patients (87 per cent) improved after treatment. In seven cases (47 per cent) symptoms were relieved entirely, in six (40 per cent) symptoms were reduced to a "mild" level, i.e. occupying less than one hour of the child's day. One case (14) remains current after protracted treatment. In another case (15) no follow-up was possible. For the remaining thirteen cases, follow-up varied between nine months and four years (mean approximately 1.8 years). Two cases (1 and 3) of the thirteen followed up followed an episodic course. Seven cases (54 per cent) were symptom-free, three were mildly incapacitated (23 per cent), and one (case

Case		Duration of out-pt. treatment (months)	Duration of admission (months)	Severity† at referral	Severity† after active treatment	Severity† at follow-up	Duration of follow-up (months)
1*	{	1	1	3	0	3	12
	l	-	7	3	0	0	9
2		8	3	2	0	0	48
3		8	1/_	2	0	2	12
4		1	2	3	0	0	40
5		4	-	2	0	0	36
6		-	2	3	0	0	24
7		3	-	2	1	0	28
8		48	1/	3	3	2	18
9		36	-	1	1	Ō	24
10		1	12	3	ī	1	12
11		-	24	3	1	1	
12		18		2	Ō	Ō	10
13		.5	-	2	1	ĩ	24
4		-	18	3	3	Current patient	
15		_	24	3	1	-	- patient

TABLE II
Outcome and follow-up

* Referred twice.

† Severity score (see Table I for legend).

8) was still severely incapacitated, though less so than before. Other than the two cases of relapse requiring re-referral, none of the patients were worse at followup, i.e. treatment gains had at least been maintained; and two (7 and 9) had shown further improvement.

Observations on response to treatment

While response to behavioural treatment was occasionally relatively straightforward, frequently difficulties were encountered which may be grouped under three headings: initiation of treatment, effectiveness, and generalisation and maintenance. It was frequently difficult to engage the child's consistent cooperation in a behavioural programme. This problem could sometimes be overcome by persuasion within the therapeutic relationship, or by using the parents' authority, or by the imposition of external controls during admission. However, none of these methods were effective in cases 11 and 15. In case 15, and in case 1 (second admission), external control by staff was thwarted by the extent and diversity of the compulsive behaviour. Not only was constant supervision impractical, but also, the suppression of one ritual led to the appearance of another. In the circumstances, the children tended to ritualize practically all activity, and this may have applied to thought as well. Another kind of obstacle to effective external control was the presence of conduct disorder (in cases 10 and 11, reported in Bolton and Turner, in press). In other cases behaviour therapy was implemented, but with little or no effect, even over

relatively long periods (cases 8, 9, 12, and 14). In one of these cases improvement in obsessional slowness within treatment sessions failed to generalize or to be maintained (case 14, reported in Clark et al, 1982). In the other three, as in case 1 (second admission), the compulsive behaviour was, or was subjectively felt to be, primarily a response to obsessional ideation. In these circumstances, the behavioural consequences of the ideation (e.g. demanding reassurance, returning to check) were treated first, by response-prevention, though little change could be achieved during periods when ruminations were particularly severe. If the behavioural responses to ideation were reduced, the frequency and unpleasantness of the ideation tended also to diminish (in case 1, and also in case 9-by followup). Treatment of obsessions directly by behavioural or cognitive-behavioural methods was tried in two cases (1 and 9), both unsuccessfully; the relative unreliability of these methods is well-known (Stern, 1978; Rachman and Hodgson, 1980). In one case (12), where there were consistent signs of depression, obsessional ruminations were relieved by clomipramine, and subsequently compulsive behaviour was reduced.

In six cases (7, 9, 10, 11, 13, and 15) treatment was only partially effective: there remained a core of obsessive-compulsive behaviour resistant to attempts at response-prevention. However, the reduction in severity in these cases was certainly clinically significant, since it enabled a return to normal function in school, or a start at work, and in most cases it meant, at

460

least a tolerable ability to function in the home. In two cases treatment had no marked effect on obsessivecompulsive symptoms: case 14, with chronic obsessional slowness, and case 8, in which a highly significant factor was mother's chronic and terminal physical illness.

Given some response to treatment, problems of generalization and maintenance sometimes arose. In two cases there was change on admission but little or none at home (case 10, with marginal improvement away from home, also, case 8); both these children were placed, with the approval of all concerned, in residential boarding school. In two cases there was relapse after about one year, in one under identifiable environmental stress (case 3), in the other not (case 1). On the other hand, there was improvement after discharge in three cases. It should be noted also that in several cases (2, 5, and 7), while follow-up showed the child to be symptom-free, there were apparent obsessive traits, such as bathing every day, wiping eating utensils before use, or checking electric switches more than once when under stress.

Finally, we may note that the two children who refused to take part in a response-prevention programme (cases 11 and 15) both improved towards the end of long admissions (two years), apparently due to the therapeutic milieu of the Unit, and to maturational processes.

Conclusions

In this section we draw some conclusions as to the nature and management of obsessive-compulsive disorder in adolescence, making some comparisons with the disorder in adulthood. In the case of a relatively recent onset of obsessive-compulsive symptoms in adolescence, the anxiety which precipitates onset is itself likely to be relatively new and acute, or at least newly heightened. The adolescent's anxiety is likely to be connected with, and possibly maintained by, corresponding parental anxiety. Parents also tend to become involved with the child's rituals. Further, insofar as the obsessive-compulsive symptoms for coping with anxiety draw on irrational, or better, on pre-rational, modes of thought and feeling, they are less likely in childhood and adolescence to be resisted and overcome by mature logic. In brief, both the anxiety and the conviction in the obsessional coping strategies are likely to be particularly high in the adolescent, and further, both may be maintained by or even enhanced by parental involvement. On the other hand, insofar as onset is relatively recent, the symptoms are less entrenched (less habitual), and thus more likely to remit spontaneously, or to respond well to treatment, at least temporarily. It is well-known that in the first years the natural course of the disorder is

typically episodic (Pollit, 1957). Thus, in some respects, the adolescent is particularly difficult to treat successfully, but in others, he is relatively wellprepared to change. This frequently presents as swings in the adolescent's motivation and behaviour, which must be allowed for in management.

As to treatment, where possible we have used response-prevention primarily, with the family engaged in therapy too. It should be noted here that family therapy is not so much an addition to the procedure of response-prevention, but rather is a particular method of carrying it out. The advantage of this method is that it operates within the child's natural environment, and acknowledges the connection between the child's anxiety and behaviour and that of the family. The effect of response-prevention may be seen in part, and expressed in cognitive terms, as giving the patient the experience (the information) that nonperformance of rituals does not lead to the catastrophe that rituals are intended to avert. Further, insofar as the parents are able to re-establish appropriate control over the child, they feel more confident, and the child feels more secure although he may protest at the time.

Response to treatment has been generally good, with symptoms in most cases being relieved entirely, or reduced to a mildly incapacitating level. These results apparently compare favourably with those of other treatment or follow-up studies of groups of obsessivecompulsive adolescents (or children and adolescents mixed). Rapoport et al (1980) reported poor results with clomipramine. While reasonable rates of symptom-relief have been reported after psychotherapy (Adams, 1973; Hollingsworth et al, 1980) and after mixed treatment during hospital admission (Warren, 1965), precise comparison with these studies is difficult for several reasons. These include the variety in agerange, in the severity of symptoms, and in the length of follow-up, as well as the lack of precision in outcome measures. We suggest, however, that the results presented here are sufficiently encouraging to justify recommending response-prevention as an important treatment for obsessive-compulsion in adolescence.

Response-prevention works against the symptoms becoming habitual, and gives child and parents the clear message that rituals are to be abandoned without further ado, and that no harm will then result. These functions could be served in other ways, e.g. by "normal expectations" during admission, but response-prevention focusses them clearly and effectively, including on an out-patient basis. This treatment approach may need to be supplemented particularly in the case of adolescents. The anxiety with which obsessive-compulsive symptoms are meant to cope may be more likely to be related to current social and emotional issues in a recently developed adolescent disorder than in a chronic adult one, e.g. concerning sexual maturation or some other adolescent life-process. Response-prevention does not work directly with anxieties of this kind, and hence it is important that they be assessed for treatment in individual therapy or, as reported here, in family therapy.

462

Acknowledgements

We gratefully acknowledge the work of past and present staff of all disciplines of the Adolescent Unit of the Bethlem Royal and Maudsley Hospitals, which forms the substance of this report. We should like to thank also the following colleagues for their helpful comments on early drafts of this paper: Mr D. Clark, Dr P. H. Connell, Ms S. Grey and Professor S. Rachman.

References

- ADAMS, P. L. (1973) Obsessive Children. New York: Brunner Mazel.
- BLACK, A. (1974) The natural history of obsessional neurosis. In Obsessional States (ed. H. R. Beech). London: Methuen.
- BOLTON, D. & TURNER, T. (In press) Obsessive-compulsive neurosis with conduct disorder in adolescence: a report of two cases. Journal of Child Psychology and Psychiatry.
- CARR, A. T. (1974) Compulsive neurosis: a review of the literature. *Psychological Bulletin*, **81**, 311-18.
- CLARK, D., SUGRIM, I. & BOLTON, D. (1982) Primary obsessional slowness: a nursing treatment programme with a 13 year old male adolescent. *Behaviour Research* and Therapy, **20**, 289–92.
- & BOLTON, D. (in preparation) (a) A psychometric study of obsessional phenomena in obsessive-compulsive adolescents.
- — & BOLTON, D. (in preparation) (b) Obsessivecompulsive adolescents and their families: a psychometric study.
- FENICHEL, O. (1946) The Psychoanalytic Theory of Neurosis. New York: Norton.
- FINE, S. (1973) Family therapy and a behavioural approach to childhood obsessive-compulsive neurosis. Archives of General Psychiatry, 28, 695–7.
- FREUD, S. (1950) Totem and Taboo. London: Routledge and Kegan Paul.
- FRIEDMANN, C. T. & SILVERS, F. M. (1977) A multimodality approach to inpatient treatment of obsessive-compulsive disorder. American Journal of Psychotherapy, 31, 456– 65.
- GREEN, D. (1980) A behavioural approach to the treatment of obsessional rituals: an adolescent case study. *Journal* of Adolescence, 3, 297-306.
- HALLAM, R. S. (1974) Extinction of ruminations: a case study. *Behaviour Therapy*, 5, 565–8.
- HOLLINGSWORTH, C. E., TANGUAY, P. E., GROSSMAN, L. & PABST, P. (1980) Long-term outcome of obsessivecompulsive disorder in childhood. Journal of the American Academy of Child Psychiatry, 19, 134-44.

- HORNE, D. J. DE L., MCTIERNAN, G. & STRAUSS, N. H. M. (1981) A case of severe obsessive-compulsive behaviour treated by nurse therapists in an inpatient unit. Behavioural Psychotherapy, 9, 46-54.
- INGRAM, I. M. (1961) Obsessional illness in mental hospital patients. Journal of Mental Science, 107, 382–402.
- JUDD, L. L. (1965) Obsessive compulsive neurosis in children. Archives of General Psychiatry, 12, 136-43.
- KRINGLEN, E. (1965) Obsessional neurotics: a long-term follow up. British Journal of Psychiatry, 111, 709-22.
- LEWIS, A. J. (1936) Problems of obsessional illness. Proceedings of the Royal Society of Medicine, 29, 325-36.
- MARKS, I. M., HODGSON, R. & RACHMAN, S. (1975) Treatment of chronic obsessive-compulsive neurosis by in vivo exposure. *British Journal of Psychiatry*, 127, 349– 64.
- MAYER-GROSS, W., SLATER, E. & ROTH, M. (1969) *Clinical Psychiatry*, 3rd Edition. London: Baillière, Tindall and Cassell.
- POLLIT, J. D. (1957) The natural history of obsessional states: a study of 150 cases. *British Medical Journal*, *i*, 194–8.
- RACHMAN, S. (1974) Primary obsessional slowness. Behaviour Research and Therapy, 12, 9–18.
- COBB, J., GREY, S., MCDONALD, B., MAWSON, D., SARTORY, G. & STERN, R. (1979) The behavioural treatment of obsessive-compulsive disorders, with and without clomipramine. *Behaviour Research and Therapy*, 17, 467-78.
- ---- & HODGSON, R. (1980) Obsessions and Compulsions. Englewood Cliffs, N.J.: Prentice-Hall.
- RAPOPORT, J., ELKINS, R. & MIKKELSEN, E. (1980) Clinical controlled trial of Chlorimipramine in adolescents with obsessive-compulsive disorder. *Psychopharmacology Bulletin*, 16, 61-3.
- SCHNEIDER, K. (1925) Zwangszustände in Schizophrenie. Archiv für Psychiatrie und Nervenkrankheiten, 74, 93– 107.
- STANLEY, L. (1980) Treatment of ritualistic behaviour in an 8 year old girl by response-prevention: a case report. Journal of Child Psychology and Psychiatry, 21, 85–90.
- STERN, R. S. (1978) Obsessive thoughts: the problem of therapy. British Journal of Psychiatry, 132, 200-5.
- & Совв, J. (1978) Phenomenology of obsessivecompulsive neurosis. British Journal of Psychiatry, 132, 233–9.
- WARREN, W. (1960) Some relationships between the psychiatry of children and of adults. *Journal of Mental Science*, 106, 815–26.
- (1965) A study of adolescent psychiatric inpatients and the outcome six or more years later. I. Clinical histories and hospital findings, II. The follow-up study. *Journal of Child Psychology and Psychiatry*, 6, 1–17, and, 141–60.

Appendix

We present, in detail, four cases (1, 5, 6, and 15) which demonstrate different kinds of difficulty and response to treatment. As already noted, three cases (10, 11, and 14) are reported elsewhere.

Case 1 Christine was referred at age 15 with obsessive sexual and violent thoughts, and compulsive retracing of her steps or actions, of about two years duration. If such a thought occurred, she would feel compelled to return to the place, or stage in a behaviour sequence, this process was felt by her to neutralize having the thought in the first place. In practice, this meant that she would take up to several hours to walk a short distance or get dressed. Christine would spend considerable time telling her mother of her thoughts, or being helped by mother to re-start activity when she got stuck. The history revealed nothing remarkable except her reported adverse reaction to the birth of twins in the family, when she was aged eighteen months. Christine responded well to brief hospital admission; her retracing was systematically prevented, which led to a reduction in the frequency and adversiveness of the ideation. She was also encouraged to speak openly and appropriately about sexual matters.

However, symptoms began to return after some seven months, and she was re-admitted after one year. This time Christine did not cooperate with behaviour therapy. Her symptoms became increasingly severe until, about two weeks after admission, she stopped speaking altogether, and other activity was also at a minimum; she indicated that she would not do anything because obsessional thoughts would be associated with anything she did. She was prescribed clomipramine and her mood lifted rapidly and speech returned.

Reported obsessional ideation and retracing, however, remained pervasive. Assessment for cognitive-behavioural treatment of ruminations was unpromising. During the assessment, Christine developed a flirtatiousness with the male therapist, which seemed to cover a disturbance which was unsuitable as a focus for brief therapy. Meanwhile she demanded much help from nurses, which was refused, as she tended to ritualize this involvement. In effect, this refusal to help was a form of response-prevention. After several weeks of being stationary for long periods, she began to abandon retracing, and the obsessional ideation also diminished. At the same time, she expressed anger at her perceived lack of attention from staff, and she became openly (or fairly openly) aggressive e.g. leading other children into minor assaults on staff. When the obsessive-compulsive symptoms subsided Christine was discharged home, and she remained symptomfree at nine month follow-up. During family therapy, mother had been encouraged to disentangle herself from Christine's ruminations and compulsions.

Case 5 Mark was transferred at age 12, with obsessivecompulsive symptoms and increasing school-refusal of about six months duration. He went to the toilet many times before school and between lessons. He wiped himself a certain number of times and used much paper; he washed his hands repeatedly, and held soap in special ways. He spent hours checking and rewriting homework. He insisted that his parents said goodnight many times, and that his mother arranged things in the bedroom in a particular way. A failure to comply led to tears and tantrums. Mark was said to have been a nervous child since a hospital admission at age three. At age seven, he was slow to learn to read and distractible at school, but these problems resolved. Treatment was homebased. The parents were able to dissociate themselves from rituals immediately, and soon took Mark back to school despite his protests.

Family therapy continued for several months, and thus supported the parents' confidence and encouraged Mark's independence. At three year follow-up Mark was symptomfree, though very clean and tidy, and was doing well at school and socially. Several times during the first year after discharge, he had been reluctant to return to school after minor illnesses, but his parents had known what to do and had taken him back to school immediately.

Case 6 David was referred at age 16. He had rituals, either by style or repetition, in the following activities: dressing, eating, washing, cleaning teeth, preparing himself and the room for bedtime, and getting into bed. Left on his own, he would often stand still for up to six hours, but usually his mother helped him along. He walked with a stoop, his hands clutching his loins, so that he wore a hole in his trousers. He banged his head with his fist at times, "to clear my mind". He delayed urination, and often wetted himself. He went into a frenzy if growing up, sex, or shaving were mentioned. He said he wanted to remain age 10. The problems were of approximately two years duration, with a steady deterioration in the year preceding referral. There was nothing remarkable in the recorded history.

David was admitted to hospitals and after a period of observation a programme of response-prevention was instituted, particularly limiting time for dressing and washing in the morning. He was highly motivated to change and go home, and responded well and quickly to the regime. The stooping and clutching of trousers gradually decreased. He was encouraged to speak about sexuality, and was desensitized to words like masturbation. He spoke little about his obsessional thoughts. Sessions with the family focussed on issues of growing up, as well as on dissociation from rituals. During admission, the father became anxious and depressed, and sought medication from his family doctor, because, he said, he could not bear to be parted from his son. The parents became very reluctant to travel to hospital and after two months discharged David against medical advice. He was symptom-free, but it was felt that work remained to be done with him individually, and with the family. The family declined to attend for follow-up two years after discharge, but father and son were interviewed by telephone. It was reported that David had had no relapse and had taken up his many hobbies again and had started work. This report was consistent with one from the original referring agency.

Case 15 Jane was referred at age 12. On domiciliary visit it was found that she had stayed for days in the same corner of the living room, dressed only in vest and pants, leaving only to defaecate in the garden. She ate little, and was constantly shouting demands at members of the family. Jane was admitted with parental consent, but against her will—screaming, kicking, shouting mummy, and lying foetus-like on the floor.

Eighteen months previously, she had begun excessive washing after toileting. This gradually worsened so that she washed up to seven hours daily, and, also, insisted that other members of the family wash after she had been to the toilet. Later she refused to use the toilet, and refused to change clothes after wetting and soiling. She had rituals when entering and leaving rooms, when going to bed at night, and when eating. She dominated most events in the home. She objected to sexy programmes on television.

Jane was admitted with these difficulties to a child psychiatric ward, where she was unresponsive to various forms of treatment. She resolved to go back to school after a year; however, she soon deteriorated into the condition described above.

There was nothing remarkable in the recorded history, nor indeed in the family, except for the gross disturbance around the symptoms themselves. EEG showed paroxysmal abnormality, precipitated by photostimulation, suggestive of subcortical origin, with a few sharp components in both hemispheres during resting.

A formal programme of response-prevention for the ritualistic behaviour was never used, partly because of its widespread and shifting nature, and partly because of Jane's total lack of cooperation. Clomipramine had no observed effect during a four month trial. Jane showed some gradual positive response to individual psychotherapy, but her attendance was erratic and eventually she stopped attending altogether.

Family therapy focussed on issues of control as well as on anxieties concerning Jane's growing up, but with marginal evident effect. However, informal expectations of conformity to normal school and ward routines, which were incompatible with at least some of the ritualizing, led to some reduction in symptoms, at first erratic, but gradually more stable. Also, Jane was able gradually to relate more with staff and peers, though she remained anxious, aloof and over-controlling in personal relationships. After a long admission (two years), by which time her symptoms were only mildly incapacitating, she expressed the wish to return home and to school. The parents declined out-patient contact after discharge, and one year later declined to be interviewed for follow-up (or to allow the child to be interviewed).

Derek Bolton, Ph.D., Lecturer in Psychology, Institute of Psychiatry; Honorary Senior Clinical Psychologist, Adolescent Unit, Bethlem Royal and Maudsley Hospitals, Monks Orchard Road, Beckenham, Kent BR3 3BX

Suzanne Collins, M.sc., Head of Psychology Services for Mentally Handicapped People, Wandsworth Health District, London

Derek Steinberg, M.Phil., F.R.C. Psych., Consultant Psychiatrist, Adolescent Unit, Bethlem Royal and Maudsley Hospitals

(Received 15 November 1982)