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Substance abuse

Substance abuse by children and young people

P McArdle

A contemporary disease

Use of illicit substances by significant numbers of young people has been of concern for at least a generation in Western Europe and North America.¹ This is reflected in official statistics, police sources and surveys, and particularly school based anonymous self-reports that have shown a substantial increase in consumption over that time with a further surge during the 1990s.¹ In addition, the rates of substance use (alcohol and drugs) in the UK currently outstrip those reported elsewhere in Europe.² Furthermore, there is now evidence of illicit substance use by significant numbers of pre-adolescent UK children;³ up to 5% of preteens currently report use of illicit substances and an appreciable number hard drugs such as heroin; apparently an entirely new development.

Despite this exposure to toxic substances, children and young people are not referred in large numbers to health services as a consequence primarily of substance related disorders. In part this is because they present in other ways: through intoxication, accidental or violent injury, self-harm, sexually transmitted disease, teenage pregnancy, and psychiatric disorder. It may be too that traditional services are unprepared for them or for adapting existing skills and resources to attempt to recognise or meet their needs.

A further problem concerns confusion of concepts and terminology. For instance, the WHO has identified “disorders due to psychoactive substance use” as “intoxication”, “dependence syndrome”, and “harmful use”. However, because they are in general likely to have been using substances for

a relatively short time, dependence among young people is probably less common than among adults. Also, the definition of “harmful use” specifically excludes “socially negative consequences”, an important type of harm for developing children and youth. DSM IV, the classification system of the American Psychiatric Association, describes a range of “substance related disorders”, including “substance use disorders”, of which “substance abuse” is a subcategory. This is characterised by “a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances”. This includes:

“... failure to fulfil major role obligations at work, school or home ... recurrent ... legal problems (and) repeated substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance ...”

In addition, a large US survey⁴ has reported that among 15–16 year olds who had used illicit drugs more than five times (“... two thirds of those who had ever used”), almost 80% of boys and 70% of girls had been “drugged or high” at school and over half had been

so while engaged in sports. The authors used the term “problem use” for this behaviour which is “intrinsically problematic from a developmental perspective”. This is consistent with UK data from older adolescents and young adults among whom 40% of those who acknowledged drug use in the past year reported dependence.⁵ Hence, the widespread view that much drug use by youth is experimental or to be regarded as part of a normal social repertoire⁶ is probably misleading.

The Health Advisory Service⁷ further discussed distinctions between use and “misuse”, the latter incorporating “problem use”; and pointed out that “use” may be best confined to “use of alcohol safely (and) ... experimental use” of illicit drugs in the older adolescent. A cautious view may be that any use of illicit substances, and perhaps alcohol without adult sanction, in younger adolescents or children is potentially problematic and should be referred to as “misuse” which therefore includes substance use disorders, abuse, and problem use.

Cannabis is the most widely misused illicit substance by Western youth.^{2, 3} It may be more potent than in the past and is currently often consumed in very high daily doses.⁸ Consequently, cannabis can potentially lead to dependence,⁹ the use of other substances,¹⁰ and physical consequences.¹¹ In the short term, perhaps as long as 30 days post-consumption, there is evidence of dose related impaired cognitive performance, particularly evident among the less intellectually advantaged.¹² In the longer term there is accumulating evidence of a dose related risk of schizophrenia that among drugs of abuse may be specific to cannabis.¹³

Other health related consequences of substance misuse include sexual disinhibition and teenage pregnancy,¹⁴ deliberate self harm (by 5–10% of boys and approximately 25% of girls who “use drugs” or drink heavily¹⁵) and death.¹⁶ UK Office of National Statistics data reveal that suicide, which shows a strong link with substance abuse,¹⁷ is second only to accidents as a cause of death among 15–24 year old males. Even among females, it is the third most common cause of death in this age group behind accidents and cancer. Deaths in young people directly attributable to substance misuse far outstrip, for instance, deaths linked to asthma. Among accommodated children, substance misuse may be a more common cause of death than mistreatment.¹⁸ Hence, health services for children and young people should have a much greater capacity to identify, assess, and respond effectively to substance misuse

than is currently the case.¹⁹ Potentially, this is not just a question of new specialists but, in order to reflect more closely the evolving patterns and scale of pathology particularly in regard to adolescents, of a reorientation of the entire child health sector, and of the research and training of its personnel.

Substance misuse has complex roots: in biological predisposition, personal development, and social context. At least in outline, the latter has been recognised for some time; as Court²⁰ remarked:

“many of those ... misusing drugs are young people with ... emotional deprivation, disturbance and separation in the family and sometimes institutionalism”.

More specific social correlates include parent-child conflict, child physical and sexual abuse,^{21, 22} family breakdown,²³ and in relation to school, scholastic failure and estrangement from teachers.¹ These experiences are linked with lasting distress²⁴ and can interfere with trusting and supportive attachments to adults. They also predict affiliation with networks of deviant peers²⁵ who introduce them to and supply them with illicit substances. This is not the same as “peer pressure” but describes a developmental trajectory that is said to “shape” a child’s social development towards deviant peers and to distance them from adults. Similar issues arise for youth who are identifiable administratively (homeless youth, those accommodated by the local authority, or involved with crime) rather than clinically as at high risk of substance abuse.²⁶

A complementary viewpoint emerges from consideration of the links between substance abuse and conduct problems or disorder, “a repetitive and persistent pattern of dissocial, aggressive, or defiant conduct”. Conduct problems have been subclassified as “adolescent limited” and “life-span persistent”.²⁷ If “life-span persistent” or early onset, disturbed behaviour may be apparent from preschool years, linked with a range of neurodevelopmental vulnerabilities, learning disabilities, impairments in capacity to form social relationships and perhaps in motor development, as well as symptoms of attention deficit hyperactivity disorder²⁸ that are likely to be substantially genetic.²⁹ In keeping with often difficult lives, many of these children experience considerable suffering manifest in anxiety and depressive symptoms.³⁰ It is likely that most children referred to paediatricians with more severe behaviour problems fall into this early onset

group. The combination of this type of individual vulnerability, other psychosocial adversity, association with deviant peers, and high availability of drugs virtually ensures substance use and presents a potent risk for abuse. However, this risk may be reduced by appropriate early intervention including, where appropriate, stimulant medication as part of a package of interventions.

Substance misuse in young adolescents or pre-adolescents may in itself indicate care and development that is awry and may require child protection investigation. Particularly among younger adolescents and children, developmentally inappropriate use of terms such as “empowerment” or “choice” should not mislead clinicians into accepting at face value refusal of treatment, undertaking to offer complete confidentiality, or to exclude parents and carers. Indeed, involvement of the latter may be crucial for successful intervention and a strong wish to exclude parents may be itself a matter of concern and raise questions concerning significant harm.⁷ Hence, substance misuse often represents a further layer on pre-existing complex developmental and social adversity, much of it familiar to child specialists. Indeed, until proven otherwise, any young person presenting with substance misuse (including intoxication) has a range of other problems.

Professionals trained to work with children potentially bring invaluable existing generic as well as specialist skills and knowledge to the health care response to substance misuse. However, they may need to embrace

“a broader view of health—emphasising mental and social as well as physical ... well-being as well as the absence of problems ...”.³¹

To intervene effectively does not necessarily require elaborate new skills or retraining, but often requires thoughtful adaptation of existing skills; structured opportunities for reflection, familiarisation, and initially supervised practice, depending on the degree of special interest. Currently, training at different levels is under development by the National Treatment Agency and UK Royal Colleges.³²

A view of competence that may be appropriate for all doctors who regularly treat older children or adolescents envisages adequate history taking, accurate information and advice, and appropriate referral. An adequate history encompasses details not only of the presenting complaint and exploration of substances used but also of the developmental and environmental, including educational

and social context of the individual. This form of systems review should seek to establish: some degree of rapport with a perhaps sceptical, mistrustful young person; who is caring for them and whether that person is able to function as a parent; whether the local authority is discharging its responsibility to educate them; whether there is evidence of child abuse, developmental problems, or mental disturbance; and who their peers are. In addition, details of their consumption of substances need to be elicited, confirmed if possible by hair, saliva, or urinalysis. In particular, is there evidence of dependence or particular risk through pregnancy or parental administration? If these data are gathered, it is likely that for many it will be the first time that anyone has asked. Furthermore, they present a framework for further action and advocacy for the patient's wellbeing.³³

Even brief interventions that are characterised by a good assessment, accurate information, and advice to reduce consumption, probably in the context of good rapport rather than a lecture, can be surprisingly effective in reduction of substance misuse by adults.³⁴⁻³⁵ Modified by additional involvement of parents and pointers to relevant local statutory and voluntary agencies, this approach could form the basis of a good consultation at this level. It might be particularly relevant to, for instance, general practice, community paediatrics, and accident and emergency departments.

At a second level of expertise, suggesting an interest in adolescent medicine, there may be scope for more elaborate intervention. This might involve energetic and sustained attention to engaging and working with young people and families and to liaison with or mobilisation of other agencies (for example, schools, child protection or family support agencies, juvenile justice) to reduce harm, and promote good care, normal development, and health.³⁶ Evidence from recent trials³⁷ suggests that such a package can ameliorate substance misuse and associated comorbidity. Even retaining young people in contact with services may be helpful, perhaps by being on hand when a therapeutic opportunity arises, or through reducing isolation or desperation.

It may also be necessary to facilitate withdrawal from addictive drugs and in a small number to prescribe substitute agents,³⁸ bearing in mind that doctors are responsible for "good clinical care"³⁹ and should never be persuaded to become a mere prescribing service. The narrow therapeutic index of some of the available agents might point to such a provision beginning as a joint consulta-

tion with an adult addictions service, perhaps with a view to the emergence of a specialist level of expertise, "paediatric addiction medicine".⁴⁰ It is not suggested that large numbers of such specialists are likely to emerge. However, sessional commitments and leadership from interested paediatricians, in partnership with others including child psychiatrists, would undoubtedly enrich the competence and rigour in the field as a whole and raise standards of care.

For the moment, substance misuse and its associated morbidity remain unfamiliar to many health practitioners who may be tempted to view it as (merely) a social problem. It is true that substance misuse is determined by cultural, social, as well as intrinsic factors (including personal choice) and it is common. Nevertheless, this is also true of many familiar health problems that in earlier generations have established themselves as unequivocally the business of health services. Indeed, it may be possible to argue that substance use disorder should be regarded as a contemporary disease of youth. This is not unnecessary "medicalising" but a call for medical professionals to be conceptually somewhat less exclusively and in a narrow sense, "bio-", and more holistically "medical", and to engage with the sometimes fatal predicament of a great number of young people in difficulties in our own cities and neighbourhoods. It is also an entreaty to research funders to invest in ways that are maximally relevant to youth. Finally, substance misuse presents an opportunity: for medicine and other health care professions to demonstrate that they remain interested in, relevant to, and competent for the health needs of modern youth.

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IMAGES IN PAEDIATRICS.....

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Crossed fused ectopic left kidney

A 5 year old boy was referred to our paediatric ward with fever, headache, and vomiting. Clinical examination elicited tenderness over both flanks and a renal ultrasound was performed. A mass extending over the midline compatible with the diagnosis of a crossed fused ectopic left kidney was noted (arrows, fig 1). A technetium-DMSA scan revealed a normally located and sized right kidney with small horizontal left kidney connected to its lower pole (arrows, fig 2). Renal SPECT showed absorption of 20% in the right and 5% in the left kidney.

A crossed fused renal ectopia is an entity where one kidney crosses over to the other side and the parenchyma of the two kidneys fuse. In most cases it involves the left kidney, as in our patient. Renal function is usually normal. Other anomalies associated with this condition are the VACTER syndrome, hydronephrosis, annular pan-

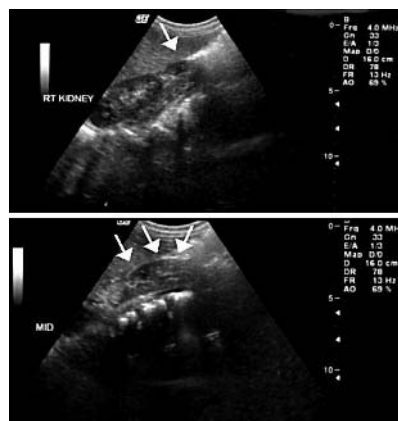


Figure 1 Renal ultrasound showed a mass extending over the midline compatible with the diagnosis of a crossed fused ectopic left kidney.

creas, and multicystic dysplasia. Most cases are sporadic but dominant inheritance has been reported.

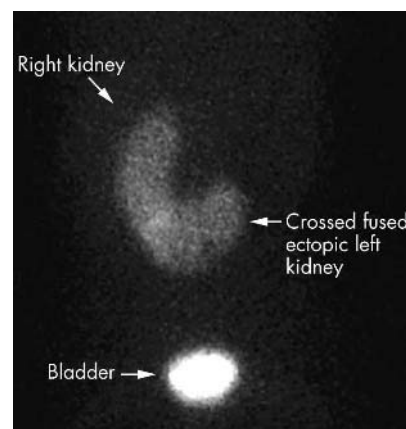


Figure 2 On the lower pole of a normal right kidney, there is a texture adjacent to it extending beyond the midline and suspected as an ectopic left kidney.

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