

# *Misuse of a Morphine Alternative (Diconal)*

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DICONAL, a combination of dipipanone hydrochloride BP 10 mg., and cyclizine hydrochloride BP 30 mg., was only available in Ireland in tablet form, pink, scored and uncoated. The rapid-acting anti-emetic cyclizine is included in the preparation to counteract any nausea or vomiting which may arise from dipipanone usage. The combination is also marketed under another brand name. Dipipanone is also available in the United Kingdom in parenteral form. Contra-indications to its use are hepatic and renal disease.

This report deals with the abuse of the drug, which reached significant proportions amongst young people in Dublin. The misuse of Diconal by young persons first came to the attention of Jervis Street Drug Advisory and Treatment Centre in the early Summer of 1970. From that time up to December 1971, sixty-four people (fifty-three males and eleven females, ranging from sixteen to thirty-one years, average age being 21.4 years) presented for the treatment of adverse effects arising from the misuse of this drug. Fifty-one took it intravenously and the remaining thirteen took the drug orally. Four of the total used both methods of administration. Sixty-one persons reported changing from other opiates: of these twenty-nine previously used heroin, nineteen morphine, seven pethidine, six methadone and four Palfium (dextromoramide), either alone or in combination.

The intravenous method used was to crush the tablets in hot or cold water, thereby obtaining a thick red paste. Some of the users injected the paste at once, but because many believed that the chalk was injurious to the blood vessels, they injected the supernatant fluid after allowing the sediment to settle. Others injected the sediment after diluting it with venous blood, a process known to the abusers as 'flushing'. If the supernatant layer only was injected the intravenous injection did not produce as marked an effect in quality or time of duration of the 'high'. The effects from Diconal varied somewhat from user to user—some described a short 'buzz' or 'high' (a sudden sensation of cerebral stimulation), followed by a feeling of exhilaration or energy, others a sleepy, dreamy, 'goofy' state preceding a sense of irritation and aggression. In no case did users find that the effects lasted longer than 3-4 hours. It served as a rather inferior heroin substitute. In a few cases Ritalin (methyl-phenidate hydrochloride) was taken in order to prolong the effect or 'high'.

No clear withdrawal syndrome was described by any of the abusers. Three young men died from intravenous overdose, death presumably being due to the cerebral depressant effects of the drug. Post-mortem examination in a fourth boy confirmed septicaemia and hepatitis. A fifth death was due to overdose with a number of drugs, including Diconal. The cause of death was given as being due to aspiration pneumonia.

In eighteen cases of Diconal abuse, there were infections of arms and legs, including venous thromboses, widespread scarring and abscesses which necessitated treatment. Two patients suffered from gangrene of the hand after injecting directly into the radial artery. In both cases a cervical sympathectomy was performed, but in one case a finger had to be

amputated later. Six chronic misusers presented with skin irritations, a blotchy red pruritic rash on the face, trunk and limbs.

Drug screening by urinalysis resulted in forty-six positive urine samples taken from twenty people in the period under review. The drug was identified in the chloroform-methanol extract from alkaline urine. The individual components of Diconal were separated from interfering material on silica gel thin-layer chromatograms. The chromatograms were developed in ethyl-acetate/methanol/ammonia. Drug location was achieved by spraying the developed plates with acidified iodopladinate, whence dipipanone was seen at Rf value 0.90 and cyclizine at Rf 0.75.

In the early stages of its misuse, Diconal was acquired mainly through breaking and entering dispensaries, later forged prescriptions were used. However; in 1971 it soon became evident that the major source was by prescription from a small number of doctors. During the Summer of 1971 the situation worsened, with the result that the illicit market was soon flooded with the drug and young people were prepared to pay up to £1 for 2-3 tablets on the black market. Some attended several doctors simultaneously and were given the drug without proper medical screening. It was reckoned that approximately fifty young people were attending one or more of the prescribing doctors at any given time and overall perhaps two hundred persons were involved in the misuse of the drug. A number of these drug-takers progressed from Diconal to stronger opiates.

The doctors involved were visited several times by the Drug Squad, until finally two were summoned for allegedly failing to comply with regulations under the Dangerous Drugs Act 1934. Because many of those misusing the drug frequently obtained it legally on a doctor's prescription, the numbers charged in connection with drug offences involving Diconal were relatively small. There were twelve charges of procuring or attempting to procure, eight of unauthorized possession and one of supplying.

Early in August 1971, a letter had been written by the National Drugs Advisory Board to practitioners generally, drawing their attention to the need for care in prescribing the preparation, especially for young people. A letter was also sent from the Jervis Street Drug Advisory and Treatment Centre to a medical newspaper, alerting practitioners about the abuse and dangers of this particular drug. Following considerable publicity and pressure from a variety of sources the marketing of the drug in this country ceased as from November 30th, 1971.

Withdrawal of a valuable drug from circulation is always a very serious step, in this case especially, as the symptoms of many terminal cases were being treated successfully with it. Withdrawal may stop irresponsible prescribing very effectively but it may also result in the misuse of some other equally dangerous drug. The Medical Registration Council would not at present appear to have sufficient powers to enable it to exercise adequate, effective and swift control in such matters as over-prescribing by doctors.

In England the only reports of misuse of Diconal, according to the Home Office in April '72, came from two areas with no apparent connection, namely Doncaster and Portsmouth. In both places the tablets are crushed and used intravenously. From our own knowledge three of the Irish abusers claimed to have obtained and misused Diconal in London. In Ireland up until April of this year the National Drugs Advisory Board has received no reports of misuse of the drug nor have any been received by the International Monitoring Scheme (12 countries).