

# Morbid and Mortal Effects of Heroin Addiction

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Heroin is a widely used narcotic in Pakistan. In a nationwide survey conducted by the Pakistan Narcotics Control Board, of 1.3 million addicts, 100,000 were taking heroin. (as reported in national press). Introduced to the Pakistani market in the eighties<sup>1</sup>, it has gradually become the commonest drug of abuse. It is generally used as a powder in cigarettes or mixed with water and injected parenterally.

Its actions have adverse effects on all major systems of the body.<sup>2-4</sup>

Majority of fatalities occurring in heroin addicts are due to acute reactions or overdoses, characterized by profound respiratory depression, arrhythmias, cardiac arrest and severe pulmonary edema<sup>5</sup>. An overwhelming majority of addicts experience overdose at least once and this may be due to a number of factors<sup>2</sup>. Firstly the drug user has no way of predicting the strength of the material he uses. A narcotic distributor in panic and fear from the federal authorities may dump virtually pure heroin into the market. Secondly an addict who has been incarcerated, hospitalised or kept drug free may consume the same amount of heroin he had used previously, disregarding his loss of tolerance for the drug.

Thirdly he may imitate his drug tolerant colleagues and use large amounts of heroin.

Pulmonary involvements include 'Narcotic Lung' a hypersensitive Pulmonary edema sometimes haemorrhagic, resembling adult respiratory distress syndrome. There may be bronchopneumonia, focal atelectasis, emphysema, pulmonary vascular changes leading to pulmonary blood flow obstruction<sup>6</sup> and cor pulmonale. chronic persistent hepatitis attributed to hepatitis B viraemia is acquired from sharing of needles<sup>7,8</sup>. There is striking enlargement of the portahepatic and peripancreatic lymph nodes. This is probably an immunologic reaction to products of degradation and metabolism of heroin in the liver<sup>9</sup>. Parenteral users may suffer from acute infective endocarditis which differ from that encountered in the general population in that patients are younger, pre-existent heart disease is uncommon, valves of the right side involved (esp. tricuspid) and the common organisms are Staphylococcus aureus<sup>10</sup> and candida albicans<sup>11</sup>

Disseminated necrotizing arteritis<sup>12</sup> resembling polyarteritis nodosa may occur either due to a hypersensitivity reaction or hepatitis B viraemia. Involvement of the kidneys comprising of mild to severe forms of glomerulonephropathy are invariably present leading to nephrotic syndrome and renal failure<sup>13,14</sup>

Cerebral neurons may undergo fatty change, edema and necrosis<sup>15,16</sup> Neuro muscular involvement may occur consisting of peripheral neuropathy, spinal cord transverse myelopathy, acute to chronic myopathy.

Cutaneous lesions common in parenteral users of the drug include scarring at the injection site, thrombosed veins, hyperpigmentation, skin abscesses, cellulitis, ulceration, urticaria and swelling of the limbs<sup>17</sup>. Tetanus may develop due to deep seated subcutaneous injections.

Malnutrition and debility are frequently present and majority of patients are immunologically incompetent. Addicted mothers demonstrate an increased incidence of toxemia and premature labour.

In addition withdrawal symptoms may be fatal for<sup>18,19</sup> the

Fulminating reactions suggesting anaphylaxis have been reported in some parenteral users<sup>21</sup> Alterations in sexual behaviour including menstrual irregularities, impotence, decreased fertility and sexual appetite may occur probably due to the sedative or euphoric properties of heroin<sup>21</sup>

It is evident that heroin addicts are highly prone to disease and death. At a time when there is an

increasing frequency of drug addicts in our society and growing public concern about drug abuse and addiction, it is necessary for the physician to be aware of these problems and be prepared to diagnose and treat them.

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