

An Assessment of Iron Supplements in the Indian Market

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Background

India is one of the countries with a very high prevalence of anemia in the world, affecting almost 75% of the Indian population. Iron supplements are the mainstay of therapy. They are also used for prophylaxis of iron deficiency anemia. There is an increasing concern over the large-scale availability of various iron supplements as fixed dose combinations with other vitamins/minerals/antioxidants as 'over the counter' agents, thereby escalating cost of treatment.

Aims & Objectives

To determine the number, composition and pharmacological rationale of the various iron supplement formulations available in the Indian market.

Materials & Methods

Data was collected from an annual Drug Compendium entitled 'THE DRUG TODAY' of the year 2013 (January-March). Medications were assessed for total number, different formulations, and number of constituents present in each formulation, their pharmacological group, amount of each constituent and rationality.

Results

There are over eight hundred iron supplements in the

Indian market, and more than 90% of the preparations were fixed-dose combinations (FDCs) with various minerals and vitamins. The majority of preparations (46%) contain carbonyl iron or ferrous sulphate. In a large number of products, the amount of iron was not specified (31%). The most common formulation for oral administration was capsules (35%). Majority of the preparations had 2-3 constituents. A wide variation in the amount of each constituent present per dose in different formulations was observed. Rationality assessment of the various FDC preparations (iron with minerals, vitamins, amino acids, antioxidants and miscellaneous products) revealed that most of these preparations were irrational, priced higher than single constituent formulations and had no documented benefit in the treatment of iron deficiency anemia.

Conclusions

The composition and amount of each constituent in an iron supplement should be detailed and properly labelled to ensure adequate treatment of iron deficiency anemia and prevent toxicity due to overdose. Availability of a large number of preparations with unknown composition as 'over the counter' agents requires a serious review of the legal provisions and regulations in India for drug manufacturing, labeling and marketing. Strict enforcement of such provisions is essential to safeguard the health of the population and limit the escalating cost of treatment of this important public health problem.