## Emergency Treatment: Intramuscular Preparations in Acute Situations

Before resorting to the emergency use of acute intramuscular (IM) agents, clinicians should attempt to convince the patient to accept oral or liquid antipsychotic preparations. The use of short-acting IM antipsychotic preparations should be used only after attempts at acceptance of oral antipsychotic treatment have failed. Liquid risperidone plus lorazepam was found to be as effective as IM haloperidol and lorazepam in agitated patients (Currier and Simpson, 2000).

Short acting IM haloperidol or its equivalent is the most widely used agent in the emergency situation. Doses of 5 mg are usually given and may be repeated at intervals as needed. The maximum total daily dose of short-acting IM haloperidol should not exceed 20mg per day.. IM ziprasidone and olanzapine are alternatives when an atypical agent is desired. This might be in patients with known sensitivity to develop EPS or other situations where it is imperative to avoid EPS, e.g. first episode patients for whom possible dystonic reactions would be most distressing. The preferred acute dose of IM ziprasidone is 10 or 20mg. IM ziprasidone and haloperidol have been shown to prolong prolong QTc to the same extent. Despite initial concerns about QTc prolongation with ziprasidone, serious cardiac adverse effects appear to be quite rare in the absence of pre-existant cardiac conduction disorders or other predisposing risk factors; no cases of Torsades de Pontes have been reported with either IM or oral ziprasidone. A thorough discussion of ziprasidone and TdP is available (Taylor, 2003).

IM olanzapine is usually given in doses of 2.5-10 mg depending on the severity of the symptomatology (Breier et al. 2002). There is no evidence that transitioning patients from these IM formulations to the same drug given orally leads to superior results than switching to another medication which may be chosen for some of the reasons discussed under choice of medication.

Patients receiving high-potency conventional antipsychotics in short-acting IM forms should be monitored daily for signs of acute dystonia, akathisia, or impending NMS. Because of QTc concerns, IM droperidol should not be a first-line option for the agitated psychotic patient. It is not appropriate to start long-acting depot preparations in this setting. For patients receiving short-acting IM haloperidol, it is recommended that concomitant anticholinergics be started at the time of the first injection and continued for at least one-week before tapering and discontinuing.

Short-acting IM benzodiazepines may be quite helpful as an adjunctive treatment or an alternative to IM antipsychotic drugs (Dorevich et al. 1999).
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