



Polypharmacy: causes and consequences

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In the last thirty years there has been a concerning increase in the prevalence of polypharmacy in treating mental illnesses across age groups and diagnostic categories.

Polypharmacy shall be described as the use of more than one drug to treat symptoms or disease.

Rationales for polypharmacy:

- for managing side effects of psychotropics
- for treating 'breakthrough' episodes and emergence of subsyndromal symptoms
- to boost the sagging response or non response to an agent
- to ameliorate morbidity risks and improve the quality of life
- to treat co-morbid conditions.

Reasons for polypharmacy:

- diagnostic concepts
- biological activities of drugs
- patient factors
- clinician beliefs

Polypharmacy in schizophrenia

- Benzodiazepine combined with antipsychotic medication is used in rapid tranquilisation.
- Carbamazepine has been helpful in treatment of psychomotor excitement, impulsivity and aggressiveness.
- Valproate has an evidence base from retrospective studies in augmenting treatment with clozapine and that it reduces clozapine induced seizures.
- Antidepressants are commonly added in patients with either negative symptoms or patients with schizophrenia who have symptoms of depression.
- The maximum number of antipsychotics given concurrently reduces survival among patients with a diagnosis of schizophrenia.

- Polypharmacy is also associated with poor mental health and social functioning.

Polypharmacy in bipolar affective disorder

- There is a cohort with severe illness which is resistant to monotherapy.
- Polypharmacy in bipolar disorder that consists of heavy antidepressant use and light mood stabiliser use is associated with poor outcomes.
- There is emerging evidence for combination of lithium with valproate or carbamazepine in acute treatment and prophylaxis.
- Lamotrigine has evidence as add-on therapy for prophylaxis of rapid cycling mood episodes in type II bipolar disorder and for treatment of acute depression in bipolar disorder.
- There is a definitive role for combining atypical antipsychotics with traditional mood stabilisers in the acute treatment of manic episodes.
- Carbamazepine interacts with drugs by inducing cytochrome P 450 drugs; sodium valproate and lamotrigine are associated with skin rash; lithium has a narrow therapeutic window.

Polypharmacy in depression

- It is hard to achieve complete remission as opposed to having a response to treatment. It is therefore not uncommon for patients with depression to be treated with more than one psychotropic medication.
- There is level A evidence for combining TCAs with either lithium or levothyroxine.
- In psychotic depression there is level A evidence for combining SSRIs with olanzapine.
- One lethal combination to avoid is MAOIs with SSRIs as it may lead to hypertensive crisis as in serotonin syndrome.

Polypharmacy in other areas

- Apart from increasing the risk of adverse effects such as sedation, dependence and respiratory suppression, use of two or more benzodiazepines is confounded with the different half-lives.
- Physical illnesses change the body's tolerance to psychotropic medications due to effects on pharmacokinetics and pharmacodynamics.
- Older patients take approximately three times as many medications as younger patients.

- Polypharmacy also increases hospital admissions due to adverse effects.
- It has become increasingly common to use polypharmacy in child and adolescent psychiatric practice though it is not recommended in NICE guidelines.

Polypharmacy and NICE

Polypharmacy is recommended only in rapid tranquilisation and augmentation of clozapine.

There is a recommendation for combination treatment in acute mania. In depressive relapse, a mood stabiliser should accompany the use of antidepressants.

Polypharmacy is possible during a swap between antidepressants. In treatment-resistant depression, combination of antidepressants and augmentation of antidepressants with lithium is recommended.

Preventing and safeguarding in polypharmacy

Interventions consisting of an educational/CBT workbook, an educational visit to consultants, and a reminder system on medication charts have been shown to reduce levels of polypharmacy.

When prescribing the following are advised:

- start low and go slow
- anticipation and proactive monitoring of the adverse effects of drug interactions
- encouraging patient adherence
- communication with the patient and GP.

After polypharmacy:

- discontinue medications that do not yield expected response
- change only one medication at a time
- complete cross tapering within an appropriate and acceptable time frame
- simplify the medication regimen.

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