



DELIRIUM IN THE PEDIATRIC POPULATION: AN UNDER-DIAGNOSED CONDITION

Kimberly A. Bower, M.D., Jeremy M. Hirst, M.D., Heather Glass, R.N., Scott A. Irwin, M.D., Ph.D.
Center for Palliative Studies, San Diego Hospice & Palliative Care, San Diego, California



INTRODUCTION

Delirium, an acute change in mental status due to an underlying medical illness, is under-studied, under-recognized and under-treated in children. Very little literature exists about delirium in terminally ill children. In the adult population the incidence of delirium near the end of life has been reported to be as high as 85%. A recent study of delirium in critically ill children reported the incidence as 5%; however, the authors felt this was an under-estimation.¹ Delirium can occur in people of any age and there are case reports of delirium in children as young as 6 months.³ Delirium is relatively uncommon in the general pediatric population, so clinicians frequently have very little experience in diagnosing and treating it. This case is intended to: 1) bring attention to the fact that delirium occurs in children, 2) illustrate how to recognize delirium in the pediatric population, and 3) highlight the appropriate treatment of delirium in children.

CASE - ISABEL

- ❖ Thirteen year-old female with metastatic hepatocellular carcinoma
- ❖ Presented with acute onset of:
 - Rapidly fluctuating mental status throughout the day with level of consciousness ranging from lethargic to alert.
 - Pronounced visual and tactile hallucinations associated with significant anxiety.
 - Disorientation (to time, place, and situation).
 - Inability to maintain attention and concentration.
 - Impaired short-term memory.
 - Repetitive purposeless movements.
 - Regression to behavior more commonly seen in younger children.

DELIRIUM

Definition

- Change in mental status with impairment in attention
- Acute onset
- Waxing and waning course

Mental Status Changes Seen in Delirium

- Impaired attention
 - Infants & toddlers – difficulty engaging
 - Children & adolescents – distractibility & inability to focus
- Disorientation
 - Young verbal children – evaluate only orientation to person and place
- Sleep-wake disturbance
- Impaired alertness
- Delusions
- Agitation
- Paranoia
- Hallucinations
- Confusion
- Impaired memory
- Fluctuating symptoms
- Depressed mood
- Apathy
- Speech disturbances
- Anxiety
- Irritability
- Affect lability

Based on a literature review of 968 adult cases and 84 pediatric cases, the same mental status changes occur in both adults and children. The frequency of occurrence of each mental status change may differ between adults and children.⁴

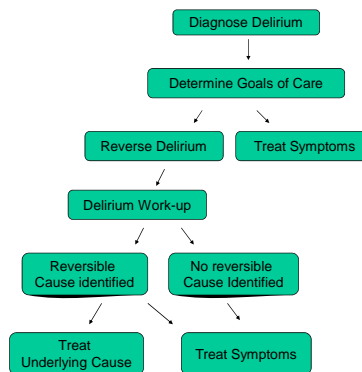
Types of Delirium

Hyperactive: Delirium with psychomotor agitation

Hypoactive: Delirium with non-agitated altered level of consciousness

Terminal: Delirium in context of signs of the active dying process

DECISION MAKING



BASIC INITIAL WORK-UP

- History & physical exam
- Work-up for
 - Infection
 - Hypoxia
 - Anemia
 - Constipation
 - Urinary retention
 - Metabolic abnormalities
 - Endocrinopathies
- Review of medications
 - Common culprits
 - Opioids, benzodiazepines, steroids, anticholinergics

SYMPTOMATIC TREATMENT

Pharmacological

Hyperactive Delirium

Antipsychotics

Hypoactive Delirium

None

vs.

Antipsychotics

and/or

Stimulants

Terminal Delirium

Benzodiazepines

and/or

Antipsychotics

Non-Pharmacological

Parent / caregiver presence

Limit caregivers & visitors

Identify all individuals every visit

Appropriate environment

Safe

Soft lighting

Limited stimulation

Orienting materials

Familiar music

Favorite toys

Pictures of home, pets, friends

Lighting schedule

Warm comfortable blanket

CASE RESOLUTION

Isabel was felt to have an irreversible delirium associated with her cancer. She received haloperidol for two weeks prior to her death. The dose was titrated up from 0.5 to 1 mg q 8 hours. Isabel's parents cared for her at home in a safe familiar environment. Her symptoms improved significantly without adverse effects of the medication and she experienced improved quality of life.

CONCLUSIONS

There is limited data on delirium in pediatric patients, but it is clear that it is under-recognized and under-treated. Delirium can cause significant distress in children. The identification and treatment of the symptom can lead to improved quality of life for both children and their care-givers.

References

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