Psychological adjustment and coping style in patients undergoing Bone Marrow/Stem Cell Transplant

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Outline of Presentation

- Introduction and background
- Aims of the study
- Methods
  - Patients, measures, procedures
- Results
- Summary and conclusions
General Background

- Cancer treatments have improved: increased remission and survival rates
- More investments in QOL and psychological adjustment research
Relevance

- BMT/SCT treatment is source of distress in both patient and carers
  (Sherman et al., 2004, Beanlands et al., 2003; Ho et al 2002; Trask et al, 2002)

- Treatment distress predicts both emotional and physical recovery
  (Trask et al., 2002; Fife et al., 2000)

*How to alleviate distress and support adjustment?*
Aims

1. In which phase of treatment do BMT/SCT patients experience most distress?

2. Which pre-treatment psychological factors predict post-treatment distress?
Recruitment

- 52 transplant patients
  - either allogenic or autologous
  - >20 years old
  - Adequate English language skills

Study Design

- Prospective longitudinal design

**Time 1:**
Day of admission
HADS, POMS, TMSI, IPQ-R

**Time 2:**
0-2 days prior to discharge
HADS, POMS

**Time 3:**
1 week post discharge
HADS, POMS

**Time 4:**
120 days post-transplant
HADS, POMS, IES-R
Self-report measures

Hospital Anxiety and Depression Scale (HADS)

Profile of Mood Scale-Short form (POMS)
  Fatigue, Total Mood Disturbance (TMD)

Impact of Events Scale (IES-R)
  Post traumatic stress symptoms (Intrusions, avoidance, hyperarousal)

Illness Perception Questionnaire-Revised (IPQ-R)

Perceptions:
- Timeline (acute, chronic, cyclical)
- Impact
- Personal control
- Treatment control
- Illness coherence
- Emotional representations

Causal attributions:
- Psychological factors
- Environmental risk factors
- Impaired immunity
- Random chance
Results: Sample

- 62 patients enrolled
- 8 patients died over the course of data collection
- 24 female, 38 male
- Mean age 49 years, range 20 to 70
- 33 autologous, 29 allogenic
- Leukemia (N=24), Lymphoma (N=15), Myeloma (N=13), Other (N=10)
Reported depression during treatment

- Admission: p<.005
- Discharge: p=.001
- 1 week post discharge: p<.001
- 120 days post discharge: p<.05
Percentage of patients scoring above clinical cut-off for HADS-Depression

Percentage of patients scoring above clinical cut-off for HADS-Depression

- Admission
- Discharge
- 1 week post discharge
- 120 days post discharge
Reported Anxiety during treatment

- Admission
- Discharge
- 1 week post discharge
- 120 days post discharge

Significance:
- p<.005
- p<.05
Reported mood disturbance during treatment

![Graph showing mood disturbance over time with p-values p<.05 and p=.01 for specific time points.](image)
Reported fatigue during treatment

- Admission: 6
- Discharge: 9
- 1 week post discharge: 9
- 120 days post discharge: 9

Significance levels:
- p<.01
- p<.01
- P<.01
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Summary: development of distress

**Depression:**
Peaks prior to discharge: Levels 5 x higher than in general population
At 120 days Levels still 2x higher than general population

**Anxiety:**
Highest before and during treatment.
Decreases post-discharge

**Total Mood Disturbance:**
Similar pattern as depression

**Fatigue:**
Remains elevated after recovery.
No signs of recovery at 120-post treatment
What predicts psychological recovery at 120 days?

- **Anxiety and depression:**
  - Pre-treatment anxiety and depression,
  - Understanding and predictability of illness
  - Illness attributions
    - Personality and stress as a cause
    - Personal risk factors (e.g., smoking, diet)
    - Environmental risk factors (e.g., pollution, virus)

- **Post-Traumatic Stress Symptoms**
  Intrusions, avoidance, arousal
  - Pre-treatment anxiety and depression
  - Illness attribution to environmental risk factors (e.g., pollution, virus)
Clinical implications

- Adequate timing of interventions
- Importance of pre-treatment screening for anxiety and depression
- Specific targeting of:
  - Transplant related anxiety
  - Depression
  - Illness attributions and causal illness beliefs
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