

Restraints and PTSD



Dr Christina Jones



UNIVERSITY OF
LIVERPOOL

Nurse Consultant Critical Care Follow-up
ICU, Whiston Hospital, and University of Liverpool, UK

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Studies - psychological recovery

Study	Subgroup	N	Anxiety	Depression	PTSD
Jones et al Brit J Inten Care 1994;2:46-53	-	28	55.5%	-	-
Koshy et al Intens Care Med 1997;23(S1):S160	-	50	-	-	15%
Schelling et al Crit Care Med 1998;26:651-659	ARDS	80	-	-	27.5%
Nelson et al Crit Care Med 2000;28(11):3626-3630	ARDS	24	43.5%	-	25%
Schnyder et al Am J Psych 2001;158:594-599	Trauma	106	-	-	14%
Scragg et al <i>Anaesth</i> 2001;56:9-14	-	80	47%	47%	15%
Jones et al Crit Care Med 2001;29(3):573-580	-	126	34%	25%	51%
Cuthbertson et al Intens Care Med 2004;30:2004-2008	-	78	-	-	5-15%
Hopkins et al 2005Am J Resp Crit Care Med 2005;171:340-347	ARDS	62	24%	16%	
Jones et al Intens Care Med 2007 DOI 10.1007/s00134-007-0600-8	-	231 (5 ICUs)	-	-	3-15%*
Girard et al Critical Care 2007 11:R28	-	43			14%

PTSD

- Variable rate of Post Traumatic Stress Disorder (PTSD)
 - 17 symptoms divided into 3 symptom categories:
 - » 1. Re-experiencing (e.g. nightmares, flashbacks)
 - » 2. Avoidance (e.g. not talking/thinking about event, memory loss)
 - » 3. Arousal (e.g. sleep disturbance, irritability)
 - Symptoms must be present > 1 month
 - Must cause significant impairment in functioning
 - Once symptoms > 3 months chronic PTSD

DSM IV-R American Psychiatric Association 2000

- Incidence varies considerably (case – mix or tools used?)
 - Case mix or mix of tools used
 - RACHEL study 3-15% with diagnostic interview tool

Post ICU PTSD

- Suggested less symptoms in steroid treated groups

ICU: Schelling et al Crit Care Med 1999; 27:2678-2683

Cardiac Surg: Schelling et al Biol Psychiatry 2004; 55:627-633

- 5 -15% incidence after general ICU
 - Relationship to duration of ventilation
 - Previous psychological stress
 - Female

Cuthbertson BH et al Int Care Med 2004, 30: 450-455

PTSD post ICU

- Drug usage in ICU (ARDS patients)
 - PTSD correlated with days of sedation and paralysis

Nelson, Weinert, Bury, Marinelli Crit Care Med 2000;28(11):3626-3630

- Small study (45 patients) showed relationship between the level of symptoms of PTSD
 - total dose of lorazepam
 - Younger patients
 - women

Girard et al 2007 <http://ccforum.com/content/11/1/R28>

Importance of memory for ICU

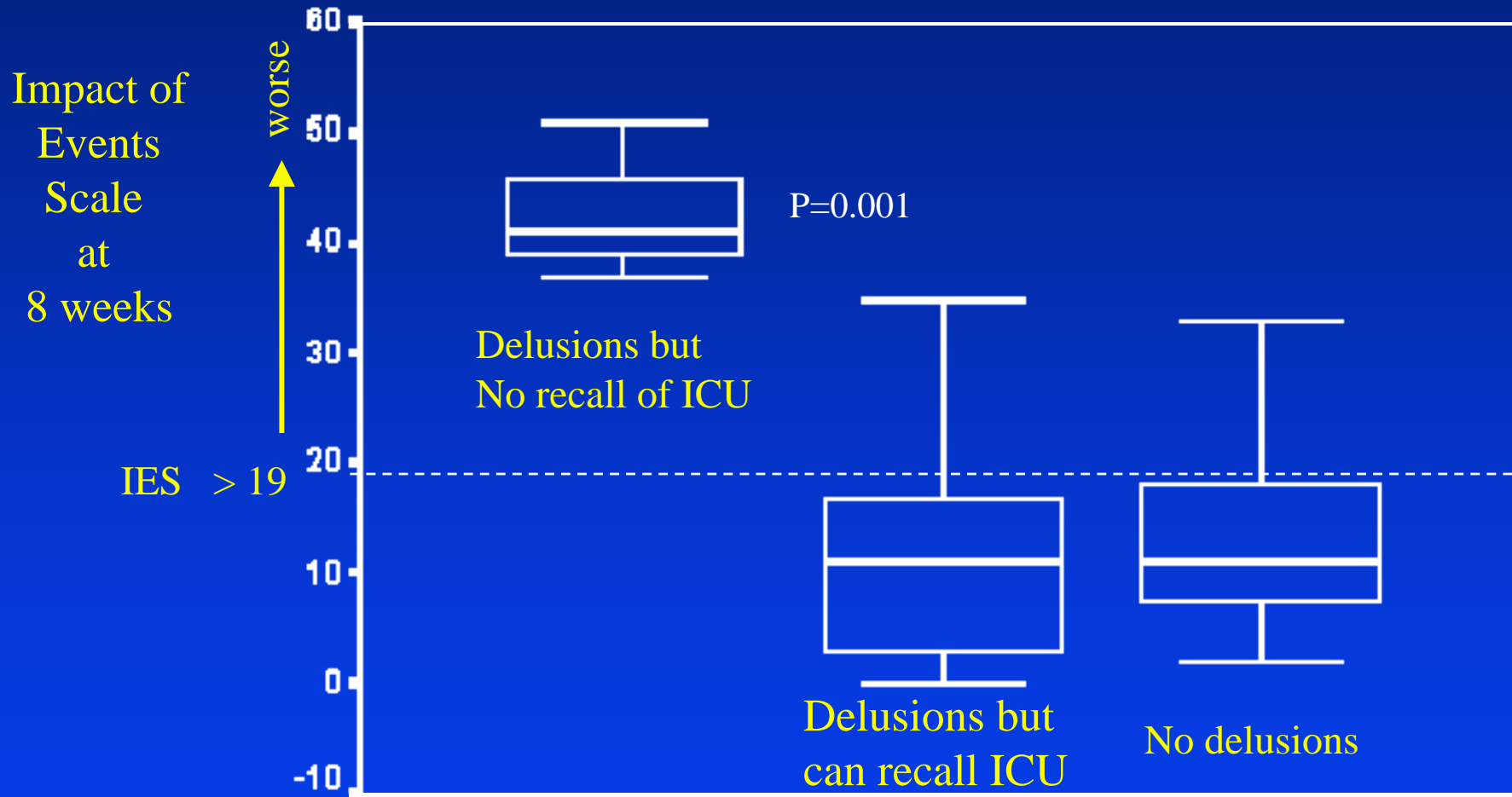
Adverse memories

- Retrospective (10yr) of patient experiences after ARDS
 - 27% incidence of PTSD
 - Patients recall of adverse experiences
 - » Nightmares (64%), Anxiety (42%), Pain (40%), Respiratory Distress (38%), None in (21%)

Schelling et al Crit Care Med 1998; 26: 651-659

PTSD related symptoms & ICU memories

30 ICU patients recall tested at 2 weeks & IES at 8 weeks post ICU



Delusional memories

- Large study (> 200) at 6 – 18 months post ICU
 - 26% recalled delusional memories
 - » More likely for younger patients and to be bothered by them
 - » More common ≥ 3 days ICU stay
 - » Temperature $\geq 38^{\circ}\text{C}$
 - » more likely not to have returned to work at 1 year

Ringdal M et al *Intensive and Critical Care Nursing* 2006;22(6):346-354

- Large study (464 patients) at 6 months post ICU
 - 93% described ICU as friendly and calm
 - Unpleasant experiences
 - » suction, nasogastric tube, family worries and pain
 - 51% recalled dreams and nightmares
 - » 14% these memories disturbed daily life
 - » Worse health related quality of life

Granja C et al. *Critical Care* 2005, R:R96-R109 (DOI 10.1186/cc3026)

RACHEL group study (2002-2005)

- 5 ICUs across Europe
 - Ratio of PTSD and relationship to:-
 - » patient previous psychological history
 - » In ICU periods of delirium or withdrawal symptoms
 - » patient care practice, e.g. sedation depth, opiate and sedation doses or physical restraint
 - » Memories for ICU

Factors associated with PTSD

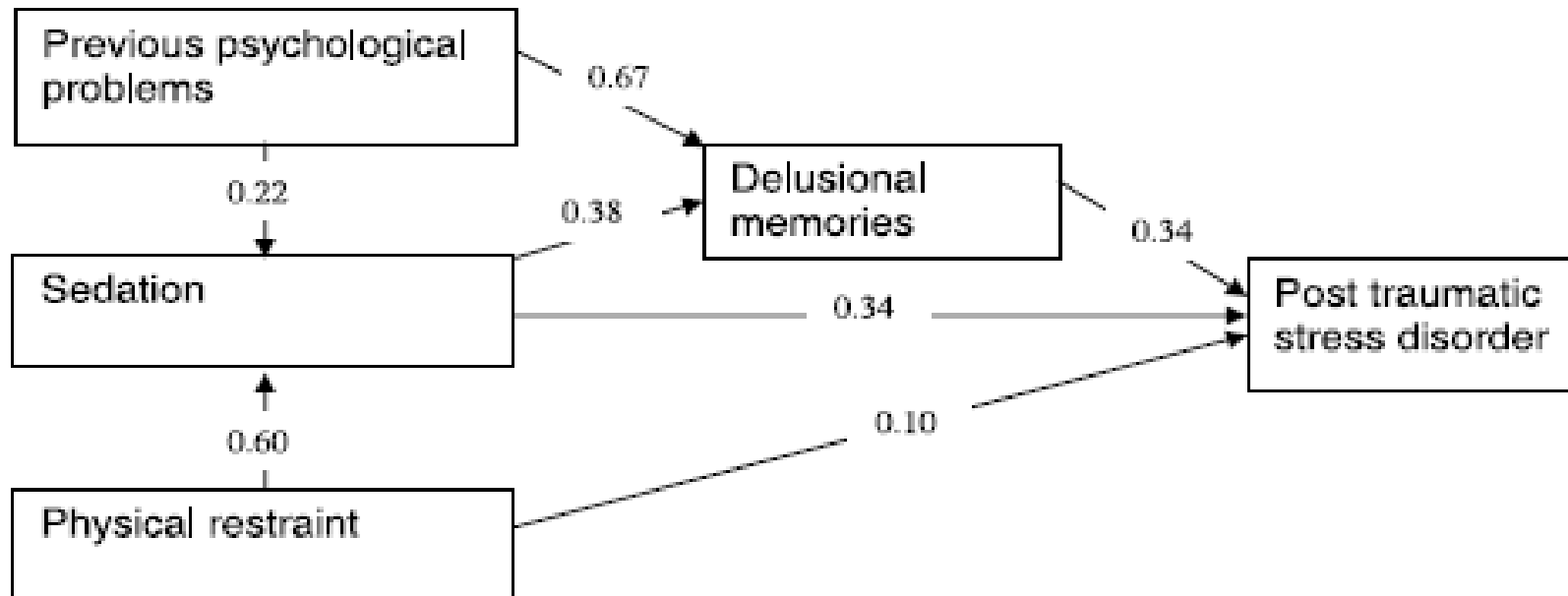
In ICU

- Physical restraint (23% of restrained patients)
 - Combined with no sedation
- Deep sedation/large sedative doses
- Recall of delusional memories

Patient factors

- Recall of delusional memories for ICU
 - More common where history of previous psychological problems
 - » Depression, anxiety, panic attacks, phobias
 - Deep sedation/large sedative doses

Structural equation modelling



Model fit

Chi-square 7.88 df = 11 $p = 0.72$

Comparative fit = 1.00

RMSEA = 0,0001

What did restraint patients remember?

- Only one patient remembered being restrained
- Half remembered delusional memories
- Type of patients
 - Older
 - Delirious
- An interview study with restrained patients showed
 - 40% remembered some aspect of being restrained but did not report great distress.
 - accepted restraints as needed because of the lack of alternatives
 - remembering that they should not perform certain behaviours but were unable to stop themselves
 - recalled hallucinations and intubation as major stressors in the ICU
 - Conclusion
 - » distress not specifically related to the use of restraints
 - » overall situation leading to use of restraints is disturbing if remembered
 - methods to reduce the distress of intubation and hallucinations could decrease use of restraints

Minnick et al American Journal of Critical Care 2001;10(3):168-171

Physical restraint

- Commonest reasons for restraint in ICU
 - Most discriminating factor of application or removal of restraints was patient's restless behaviour

Choi, E, Song, M J *Clinical Nursing*, Sep 2003;12(5):962-1067

- Prevent equipment removal

Akansel N *Health Science Journal* 2007;1(4):1108

- Probably the same reasons that UK nurses restart sedation
 - More likely to occur in the elderly
- Minnick et al *Journal of Nursing Scholarship* 2007;39(1):30-37

Restraint in ICU

- learning plan "Knot-So-Fast", and tool "Restraint Decision Wheel" reduces restraint use in ICU
- Delirium (using CAM-ICU) predicts restraint use

Hurlock et al *Dynamics* 2006;17(3):12-18

Micek et al *Critical Care Medicine* 2005;33(6):1260-1265

Restraint literature not ICU

- Use of excessive force: court upholds psych patient's lawsuit against nurses for PTSD

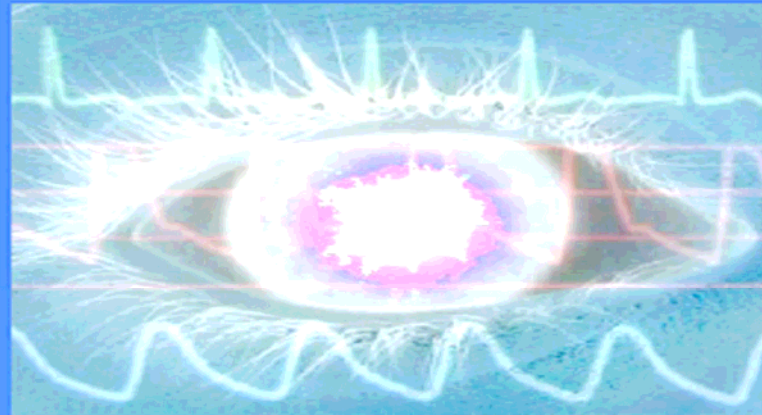
Legal Eagle Eye Newsletter for the Nursing Profession, 01 December 2001, vol./is. 9/12(3-3), 10854924

- History of trauma in people with schizophrenia predicts need for seclusion and restraint

Steinert et al Journal of Clinical Psychiatry, 2006;67(6):160-189

Preventing restraint (physical or chemical)

Detection, Prevention
and Treatment of
Delirium
in Critically Ill Patients



Mark Borthwick
Richard Bourne
Mark Craig
Annette Egan
Julia Oxley

June 2006



Recommendations

- Using a tool such as the CAM ICU
- Using non-pharmacological interventions
 - Orientating the patient to time and place
 - Identifying and correcting sensory impairments
 - » Glasses & hearing aids
 - Removing potential organic drivers
 - » Hypoxia, pain, acidosis etc
- Removing pharmacological contributors
- If all else fails recommends haloperidol

What should we aim for?

- Calm, comfortable and awake patients
 - ? Remifentanyl
 - Low dose sedation
 - Get to know the patient from the family
 - » Do they take any psychotropic medication?
 - » What is their normal response to stress?
 - » Are they claustrophobic?
 - » Do they respond to reassurance?
 - Use a delirium tool
 - » Remove possible causes
 - » Treat with haloperidol where necessary