

CONCUSSION SUBTYPING IN PEDIATRIC PATIENTS WITH PERSISTENT POST CONCUSSIVE SYMPTOMS USING A NEW CONCUSSION CLINICAL PROFILE SCREEN TOOL (CP SCREEN)

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Background: The clinical profile screen (CP-Screen) is designed to evaluate 5 clinical profiles and 2 modifiers that are predominant within concussion patients. The CP screen includes 29 items that are expressed as weighted outcome scores for each of the seven concussion subtypes (Kontos et al 2020).

Purpose: Identify the prevalence of subtypes in Persistent Post Concussion Symptoms (PPCS) and investigate their potential relationships in pediatric patients .

Design/Methods: This was a retrospective-chart review of 460 visits for 155 patients with PPCS at a concussion center with average duration of symptoms being 16.4 weeks (4 months). Age range was 12-21 and average age was 17 years old, 58% were female and 42% male. Each patient completed an electronic CP-Screen prior to each visit, which was electronically uploaded to the EHR. All patients were seen between October 2020 and June 2021.

Results:

Overall, the most common subtypes were cognitive (34.01%), visual (20.70%) and mood (17.56%).

The highest overall observed subtype average CP symptom score was mood (27.84/89) and the lowest was neck (22.15/89).

For males the most common phenotypes were cognitive (34.84%), visual (23.23%), and mood (17.17%).

The highest observed male average CP symptom score was mood (25.82/89) and the lowest was vestibular (18.2/89).

For females the most common phenotypes were cognitive (33.52%), visual (19.24%), and mood (17.78%).

The highest observed female average CP symptom score was vestibular (29.67/89) and the lowest was sleep (19.94/89).

Cognitive, mood, neck, vestibular, and migraine primary profiles all presented with visual as their secondary profile.

Sleep was the least observed phenotype and did not appear to be highly associated with any other phenotypes in our cohort.

Conclusion: CP screen was overall a useful tool in helping identify clinical profiles in PPCS for pediatric patients. Cognitive fatigue was a predominant profile in PPCS across both sexes and appeared to be linked closely with visual profile. Overall those with predominant mood profile presented with the highest symptom scores. Visual profile was in general found to be linked to the most profiles. Sleep was the least common profile overall

Table 1.1

Primary		Secondary		Tertiary	
Cognitive	184	Occular	16	Neck	6
Occular	112	Cognitive	16	Mood/Migraine	13
Mood	95	Occular	13	Vestibular	7
Neck	51	Cognitive	6	Occular	4
Vestibular	37	Occular	11	Mood	7
Migraine	36	Occular	13	Vestibular	6
Sleep	26	Cognitive/Neck	2		

Figure 1.2

