



Tan Tock Seng
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The Impact of Covid-19 Control Measures on Trauma Workload in a Tertiary Centre in Singapore

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Adding years of healthy life

Background

Singapore had among the world's highest case numbers in the first quarter of 2020 due to extensive testing and a high population density. The government announced progressively stricter measures (which culminated in a "circuit breaker") to reduce community spread and preserve healthcare capacity. We studied the impact of these measures on the trauma load at Tan Tock Seng Hospital (TTSH), the busiest trauma centre in the country.



TTSH (Right) / Trauma resuscitation bay (left)

Methods

After ethics approval was obtained, we queried the trauma registry for severely injured trauma patients admitted between January and April 2020. This data was then compared with patients from the same dates for the two preceding years (2018/2019). Statistical analysis was performed using SPSS.

Results

A total of 93 patients were admitted during the study period, with demographics as shown below.

	2018	2019	2020
Total admissions	118	111	93
Age			
21-40	54 (45.8%)	35 (31.5%)	37 (39.8%)
41-60	25 (21.2%)	30 (27.0%)	30 (32.3%)
>61	39 (33.1%)	46 (41.4%)	26 (28.0%)
Gender			
Male	93 (78.8%)	88 (79.3%)	75 (80.6%)
Female	25 (21.2%)	23 (20.7%)	18 (19.4%)

Table 1: Patient demographics

	2018	2019	2020
Total admissions	118	111	93
Primary mechanism of injury			
Vehicular Accident	76 (64.4%)	74 (66.7%)	59 (63.4%)
Fall	22 (18.6%)	12 (10.8%)	14 (15.1%)
Injury Severity Score			
0-8	8 (6.8%)	9 (8.1%)	9 (9.7%)
9-15	70 (59.3%)	66 (59.5%)	55 (59.1%)
>15	40 (33.9%)	36 (32.4%)	29 (31.2%)
Surgeries done			
Yes	56 (47.5%)	56 (50.5%)	49 (52.7%)
No	62 (52.5%)	55 (49.5%)	44 (47.3%)
Trauma team activated			
Yes	74 (62.7%)	73 (65.8%)	48 (51.6%)
No	44 (37.3%)	38 (34.2%)	45 (48.4%)
Disposition from the emergency department			
General ward	68 (57.6%)	63 (56.8%)	57 (61.3%)
Subacute care unit	7 (5.9%)	4 (3.6%)	4 (4.3%)
High dependency unit	23 (19.5%)	29 (26.1%)	20 (21.5%)
Intensive care unit	15 (12.7%)	11 (9.9%)	9 (9.7%)
Dead	5 (4.2%)	4 (3.6%)	4 (4.3%)

Table 2: Patterns of injury

Injury patterns, injury severity score (ISS), intensive care and high dependency ward admission were all unchanged as well (refer to Table 1). The trauma team was activated in 51.6% of cases, and 52.7% of patients required operative intervention, compared to 50.5% and 47.5% for the past two years. Statistical analysis showed that there was no difference in any of these variables (P values ranging from 0.1 to 0.8).

Discussion

The Covid-19 pandemic led to many surgical units ceasing their elective load and redeploying manpower to manage pandemic patients. While this is necessary, our study shows that the trauma team should maintain a posture similar to pre-pandemic times. It is also crucial that associated specialties who manage trauma patients (such as Orthopaedics/Neurosurgery) should be available even as the world grapples with successive waves of Covid 19 patients. This will prevent unnecessary morbidity/mortality during this difficult time.

