Tintin's travel traumas: Health issues affecting the intrepid globetrotter

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Summary

Background > Despite the highly hazardous life-style led by comic book characters such as Tintin, we are unaware of any previous systematic description of the challenges and health impairments faced by Tintin in the course of his adventures.

Methods > We evaluated the spectrum of health impairments (HIs) that Tintin sustained in his 23 adventures as well as their causes, consequences, and relation to travel. We diagnosed Tintin's HIs according to descriptive terms in the text. We then classified HIs as traumatic and non-traumatic, and distinguished between intentional (those perpetrated by others) and unintentional events.

Results > We found 236 events leading to 244 HIs, 13 kidnappings, six hospitalisations and two surgical procedures. There was a median of 8 HIs/adventure (range 1-30/adventure). The mean number of HIs per adventure was much greater before 1945 than subsequently (14.9 vs. 6.1; P = 0.002), which was also true of the number of kidnappings (11 vs. 2; P = 0.001). Of the 244 HIs, there were 191 cases of trauma (78.3%) and 53 non-traumatic problems (21.7%). The most common form of trauma was concussion (62%) whereas the most common forms of non-traumatic problems were sleep problems (15.1%), depression/anxiety (13%), and gas or chloroform poisoning (13%). Overall, we found 46 losses of consciousness (LoC), including 29 traumatic and 17 non-traumatic LoCs. Of the 236 events, there were 69 (29%) perpetrated by others against Tintin (including 55 homicide attempts), and 167 (71%) events that were not (including 69 events related to Tintin’s actions).

Conclusion > Tintin’s almost superhuman qualities, a luxury afforded him by his fictional status, make him highly resistant to trauma. He is also not susceptible to the usual travel-related illnesses but is easily influenced by his friends and Snowy, his faithful hound.
Résumé

Les problèmes de santé de Tintin : plus de traumatismes que de pathologies du voyageur

Intérêt > Malgré la vie hasardeuse menée par les héros de bandes dessinées comme Tintin, nous n'avons pas connaissance d'études ayant évalué les événements et les problèmes de santé présentés par Tintin pendant ses aventures.

Méthodes > Nous avons évalué le spectre des problèmes de santé (PS) que Tintin a eu au cours des ses 23 aventures, ainsi que leurs causes, conséquences et lien avec le voyage. Les PS ont été diagnostiqués en fonction de leur description dans le texte puis classés en distinguant les problèmes traumatiques des problèmes non traumatiques. Les causes ont été classées en distinguant les événements intentionnels et non intentionnels.

Résultats > Nous avons trouvé 236 événements conduisant à 244 PS, 13 kidnappings, six hospitalisations et deux actes chirurgicaux. Le nombre médian de PS est de 8/aventure (1-30/aventure). Le nombre moyen d'événements par aventure était significativement plus élevé avant 1945 (14.9 vs 6.1 ; p = 0.002), de même pour les kidnappings (11 vs 2 ; p = 0.001). Parmi les 244 PS, 191 étaient traumatiques (78.3 %) et 53 non traumatiques (21.7 %). Les plus fréquents des traumatismes étaient les traumatismes crâniens (62 %), et les plus fréquents des PS non traumatiques étaient les problèmes de sommeil (15.1 %), les manifestations anxieuses (13 %), et les intoxications au gaz ou au chloroforme (13 %). Nous avons trouvé 46 pertes de conscience : 29 d'origine traumatique et 17 non traumatiques. Parmi les 236 événements, 69 (29 %) sont intentionnels, perpétrés par des tiers contre Tintin (dont 55 tentatives d'homicides), et 167 (71 %) non intentionnels (dont 69 sont la conséquence des actions de Tintin).

Conclusion > Les qualités presque surhumaines de Tintin font de lui un personnage de fiction très résistant aux traumatismes. Tintin n'a pas de PS liés aux voyages. Mais il semble être très vulnérable aux problèmes affectant ses compagnons de voyage et notamment Milou, son fidèle compagnon.
We assessed the full spectrum of HIs revealed in Tintin's adventures and their causes, consequences, and relation to travel.

**Methods**

We (F.L., E.C.) scrutinised in parallel and blinded manner all 23 completed volumes of Tintin's adventures. Focussing on Tintin, the protagonist, we assessed all the HIs that arose throughout his stays in Belgium and during his travels to tropical and non-tropical countries. We distinguished tropical from non-tropical countries using geographic and climatic criteria. We diagnosed the types of HI according to the clinical description of Tintin, or his response, in the frames of the strip where each new HI occurred, and in the subsequent frames that often amplified the medical nature of the event. We primarily distinguished traumatic and non-traumatic HIs. We classified HIs as BTwC (Body trauma without consequences other than pain), visible injuries (bumps, scratches and burns), concussion, loss of consciousness (LoC), and any other major HIs acknowledged by Tintin or the authors. BTwC other than pain were defined by symbols revolving around Tintin's body (except his head) following a significant trauma without further visible consequences. 'Concussion' was defined as any head traumatic lesion and was termed ‘grade I’ (stars spinning round Tintin's head), ‘grade II’ (squiggles, candles, bolts of lightning surrounding his head), ‘grade III’ (LoC lasting no more than one frame), and ‘grade IV’ (LoC lasting at least two frames). LoC included traumatic LoC (TLoC) (i.e. grade III and IV concussion, and asphyxia), and non-traumatic LoC (NTLoC) (LoC from non-traumatic causes like gas poisoning).

We excluded events that might have resulted in an HI with any normal mortal, but not Tintin. We only considered significant events revealed at least by symbols (candles, stars, squiggles) revolving around any part of Tintin's body (head, limbs or trunk). Where symbols surrounded two people, including Tintin, in a single frame, we only logged the incident if Tintin clearly appeared as a victim of the HI. We defined a LoC's duration by the number of elapsed frames before Tintin reverted to his usual appearance or behaviour.

For each HI we assessed: geographical location (distinguishing between Belgium, non-tropical and tropical sites, and undetermined ones), cause (distinguishing intentional from unintentional events), and consequences (surgery, hospitalisation). Intentional HIs perpetrated by others included attempted homicide or assault, arrest, and events provoked by Tintin's friends (termed “friend-related’’). Unintentional causes of HIs include environment-related events (animal exposure, natural disasters, extreme temperatures), transport accidents, events resulting from Tintin's acts, or following his lapses of judgement (termed “Tintin-related’’), and other unintentional events. Each category included one to nine items.

We assessed the number of HIs per adventure, those occurring in Belgium and elsewhere, distinguishing between tropical, non-tropical, and undetermined countries. We summarised categorical variables using percentages, and made comparisons by using the Fisher exact test. We summarised continuous variables using means ± standard deviations and compared using the Student test.

**Results**

Tintin travelled to four of the world's five inhabited continents, visiting 23 countries plus the moon and a meteorite. Among the 18 real countries Tintin visited besides Belgium, eight were tropical and ten non-tropical (table I). Tintin also visited five fictitious countries. We classified Borduria and Sylrdavia as non-tropical, and Khemed, Nuevo Rico and San Theodoros
as tropical countries, totalling 11 tropical and 12 non-tropical countries. The only destinations most readers could not expect to visit, space, the moon (Explorers on the Moon), and a meteorite (The Shooting Star), were classified as ‘undetermined’. We found 244 HIs (mean 8.4/adventure [standard deviation 5.8], median 8/adventure; range 1–30/adventure) and 13 kidnappings (table I). Half the adventures were written between 1930 and 1945 (median = 1944). There was at least one HI per adventure. The mean number of HIs per album was significantly higher before 1945 than afterwards (14.9 ± 7.1 vs. 6.1 ± 4.7; P = 0.002). This was also true for the number of kidnappings (11 vs. 2, e.g. 1.0 per album ± 0.7 vs. 0.09 ± 0.3; P = 0.001). Kidnapping was associated with HIs ten times, six resulting from traumatic attack and four from gas or chloroform poisoning. Three kidnappings were not associated with any HI (table I).

Of the 244 HIs that occur in the 23 adventures, there were 191 traumas (78.3%) and 53 non-traumatic problems (21.7%). The most common forms of trauma were grade I and II concussion (47%), BTwC (28%) and grade III and IV concussion (16%) (table II). Overall there were 118 cases of concussion (112 concussion alone, and six associated with polytrauma) accounting for 48.4% of all HIs. The other traumatic injuries included those caused by animals, burns, and gunshot wounds. The most common forms of non-traumatic problems were sleep problems (15.1%), depression/anxiety (13%), gas or chloroform poisoning (13%), and alcohol-related problems (9.4%) (box 1). We found 46 LoCs (28 grade III/IV concussions, one asphyxia related to strangulation by Captain Haddock, and 17 non-traumatic LoCs) (table III). However, the consequences of LoC (the number of frames where Tintin was affected) could be evaluated in only 36 cases of LoC, with a mean of 9.5 ± 11 frames involved per LoC.
Despite leading such a dangerous life, Tintin was hospitalised only six times, including twice in one adventure (The Black Island). His stays ranged from one day in three adventures, to a few days or even weeks in three of his exploits. Hospitalisation twice followed gunshot wounds, and a car crash, fire, explosion and extra-terrestrial hypnosis once each. A car crash also brought a visit to casualty, which Tintin left without medical examination (King Ottokar’s Sceptre).

Tintin twice underwent surgery after being shot (The Black Island, Destination Moon). Fortunately, the bullets merely grazed a rib or his skull. These two gunshots also caused a LoC. Tintin was also shot twice in the Land of the Soviets and in The Blue Lotus, but presented with nothing worse than a BTwC and a minor injury leading to shoulder immobilisation, respectively.

There were 236 events since eight of the events resulted in two HIs. Of these 236 events, 69 (29%) were intentional and 167 (71%) were unintentional. The two most common events were homicide attempts, accounting for 80% of intentional causes and Tintin-related events representing 41.3% of unintentional causes. The other causal events by order of frequency were environment-related events, transport accidents, Tintin’s friends’ (mis)behaviour, and arrests (table IV). The most frequently used weapon in attempted homicide or assault was a club or other object.

There were 33 transport accidents, including 27 unintentional accidents and six intentionally-caused accidents resulting from attempted homicide. The main means of transport involved in accidents were cars and aeroplanes. Of the 27 unintentional transport accidents, none occurred in Belgium; 24 happened in other countries (eight in tropical and 12 in non-tropical countries), and three en route.

The commonest environment-related events were animal exposure and natural disasters (avalanches, earthquakes, storms, Ocean waves) while extremes of temperature were less frequent (table IV). Of the seven injuries (bites, scratches) caused by animals, one scratch (condor) and two bites (lion, piranha) occurred in tropical countries, while two bites (by a rat and a shark) took place en route, one (by Snowy) on the meteorite and one (by a parrot) in Belgium. The eighth case of biting was inflicted by the boy Abdallah, so we classified the causal event as friend-related.

### Table II

**Traumatic health impairments suffered by Tintin**

<table>
<thead>
<tr>
<th>Concussion alone</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade I and II</td>
<td>84</td>
</tr>
<tr>
<td>Grade III</td>
<td>2</td>
</tr>
<tr>
<td>Grade IV</td>
<td>24</td>
</tr>
<tr>
<td>Grade III/IV</td>
<td>2</td>
</tr>
</tbody>
</table>

- Total Concussion alone: 112

<table>
<thead>
<tr>
<th>Polytrauma</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BTwC</td>
<td></td>
</tr>
<tr>
<td>Back</td>
<td>8</td>
</tr>
<tr>
<td>Bottom</td>
<td>16</td>
</tr>
<tr>
<td>Foot</td>
<td>4</td>
</tr>
<tr>
<td>Upper limbs</td>
<td>12</td>
</tr>
<tr>
<td>Neck</td>
<td>5</td>
</tr>
<tr>
<td>Shoulder</td>
<td>2</td>
</tr>
<tr>
<td>Trunk</td>
<td>6</td>
</tr>
</tbody>
</table>

- Total BTwC: 53

<table>
<thead>
<tr>
<th>Burns</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gunshot injury</td>
<td></td>
</tr>
<tr>
<td>Bite</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
</tr>
</tbody>
</table>

- Total: 191

<table>
<thead>
<tr>
<th>BTwC: body trauma without consequences other than pain; LoC: loss of consciousness.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1All polytrauma were associated with concussion grade I (n = 4) or grade II (n = 2) giving a total of 118 concussions.</td>
</tr>
<tr>
<td>2Including one related to gunshot.</td>
</tr>
<tr>
<td>3Including 3 injuries (shoulder, skull and rib) in association with LoC in two cases.</td>
</tr>
<tr>
<td>4Bites by dog (Snowy), human (Abdallah), lion, parrot, piraña, rat, shark (one each).</td>
</tr>
<tr>
<td>5Including scratches (condor), bumps, ankle twisting and strangulation.</td>
</tr>
</tbody>
</table>

### Box 1

**Non-traumatic health impairments suffered by Tintin**

<table>
<thead>
<tr>
<th>Non-traumatic health impairments</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep problems</td>
<td></td>
</tr>
<tr>
<td>Intoxication</td>
<td></td>
</tr>
<tr>
<td>Depression/anxiety (tears)</td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
</tr>
<tr>
<td>G-Force</td>
<td></td>
</tr>
<tr>
<td>Lack of oxygen</td>
<td></td>
</tr>
<tr>
<td>Cold-related</td>
<td></td>
</tr>
<tr>
<td>Profound asthenia</td>
<td></td>
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<tr>
<td>Heat stroke</td>
<td></td>
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<tr>
<td>Near-drowning</td>
<td></td>
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<tr>
<td>Amnesia</td>
<td></td>
</tr>
<tr>
<td>Coryza</td>
<td></td>
</tr>
<tr>
<td>View troubles</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
</tr>
</tbody>
</table>

- TOTAL: 53

- 1Including 5 nightmare, and 3 insomnia. |
- 2Including 3 toxic gas, and 4 chloroform-inhalation. |
- 3Linked to Chang (n = 4) or Snowy (n = 2) disappearance, and singing Bianca Castafiore. |
- 4Including psychotic access, high stress, hypoglycaemia, and CO-inhalation (one each).
Discussion

This first snapshot of the 244 HIs in the 23 adventures reveals that HIs were common in Tintin’s adventures, trauma accounting for 78% of HIs and concussion for 48%. But Tintin was highly resilient, being hospitalised a mere six times and undergoing surgery just twice.

We witnessed a sharp decline in HIs and a marked decrease of kidnapings in his Adventures after 1945. This deserves an explanation. From the outset, Tintin shares his adventures with...
Homicide attempts  
Arrest  
Friend related  
Tintin related  

Total Intentional  
69

Unintentional  

Tintin-related  
Environmental  
Transport accidents  
Other unintentional events  
Friend-related  

Total Unintentional  
167

1Including six intentionally-caused transport accidents (car = 2; motor track = 1; motorbike = 1; parachute = 1, as pedestrian = 1).
2Including 27 falling on something or someone, 21 medical problems (sleep problems, depression/anxiety, asthenia...), 15 bumping into someone or into something, and five other events.
3Including 11 natural disasters (avalanche = 2; sandstorm = 3; earthquake = 3; lightning = 1; petrol jet = 1; storm = 1), 14 animal exposures (horse = 3; lion = 2; shark = 2; bear = 1; condor = 1; electric ray = 1; parrot = 1; piranha = 1; rat = 1; yak = 1), 5 extreme temperatures (cold = 3; heat = 2) and two other environmental events.

We therefore used an "Hergé" grading system after considering the clinically evident post-traumatic signs (symbols surrounding Tintin's head after trauma): stars (grade I), whirls (grade II), and where the traumas were severe in over 50% of head wounds. But there, all the characters were scrutinised, not only the heroes [9].

LoCs were the severest HIs, and represent 18.8% of all HIs. They mostly related to severe (grade III and IV) concussions (60.9% of LoCs) and intoxication (13%) or G-force injuries (8.7%) (table III).

The commonest non-traumatic HIs were sleep disturbances (nightmares, insomnia), intoxication (gas, chloroform), and manifestations of anxiety or depression (tears), as highlighted in another study which focused solely on mental disorders in the characters who appear in Tintin adventures [4]. Sleep disturbances might reasonably be attributed to Tintin's highly stressful life. Tintin even bursts into tears when the lives of his dearest companions (Snowy and Chang) are in peril or when he is separated from them. Despite his super-human qualities, Tintin is also a 'regular guy', which unquestionably boosts his popularity [2].

There was no clear relationship between the type of HI and travel destination when we focused on tropical destinations alone. Tintin presents none of the commonest travel-related health impairments such as diarrhoea, respiratory tract infections, sunburn, insect bites or fever [10]. For instance, when travelling by boat he is not seasick although this is the commonest HI on ships [11]. When scaling the Himalayas or the Andes, he never suffers altitude sickness although this is a common HI among travellers to Peru [12].

Although in Tintin's adventures transport accidents are non-fatal, road accidents are the leading cause of non-natural deaths suffered by travellers abroad and are more frequent than intentional injuries [13]. Southeast Asia produces the highest unintentional injury death rates for Americans abroad owing to the high death rate from motorbike accidents, especially in Thailand and Vietnam.

Homicide attempts 55
Arrest 7
Friend related 5
Tintin related 2

Two hundred and thirty-six events leading to 244 health impairments suffered by Tintin

Homicide attempts
Arrest
Friend related
Tintin related

Total intentional 69

Environmental
Transport accidents
Other unintentional events
Friend-related

Total Unintentional 167

1Including six intentionally-caused transport accidents (car = 2; motor track = 1; motorbike = 1; parachute = 1, as pedestrian = 1).
2Including 27 falling on something or someone, 21 medical problems (sleep problems, depression/anxiety, asthenia...), 15 bumping into someone or into something, and five other events.
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Some of the HIs resulted from exposure to animals, (bites, scratches, shaking, shocks, bumps, strangulation) primarily Snowy (who is presumably not vaccinated against rabies), but also with a vast menagerie of non-canines (horses, lions, sharks, condors, electric rays, parrots, piranhas, rats and yaks). The outcome was a bite in six cases and scratches in one. Although the animals are not typical rabies carriers, travellers who lead quite such adventurous lives should certainly consider getting vaccinated prior to their travels [14].

We found five alcohol-related HIs in Tintin, including two in his first adventure and one in his final escapade. The first two relate to heavy drinking in Russia, and the last results from Professor Calculus’s experimental anti-alcohol pill. This pill was intended to wean Captain Haddock off alcohol, but Tintin inadvertently swallowed it and suffered its effects.

Tintin’s sometime profession of journalism entails risks such as kidnapping. This is truly an escalating concern as the number of journalists kidnapped more than doubled in 2013 [15]. Our hero is kidnapped no fewer than 13 times. He is taken hostage in just one adventure (Lord of Black Gold) in the Middle East. No ransom is demanded and he is rescued four times by his faithful companion, Snowy. Perhaps thereafter Tintin becomes less vulnerable since he was kidnapped only once after 1950 (table I). Could he have gained some wisdom with age?

Tintin also presents HIs that result from aberrant behaviour by his closest companions. It is hard to escape the conclusion that they behave bizarrely because of significant underlying health problems [1,2]. Captain Haddock is an alcoholic, Professor Calculus is stone deaf, and Thomson and Thompson are just plain stupid. This study has some limitations. We may have missed some health events or kidnappings. The dividing line between a modest trauma and a significant trauma leading to a HI is sometimes narrow since Hergé also uses symbols to accentuate a narrative event. In some instances, it was also hard to differentiate between a simple homicide and a kidnapping when the aim of the kidnapping was homicide. Also, none of the authors is a traumatologist. Finally, Hergé’s scenarios are so rich in content that it was a challenge to classify some of the HIs. It was especially tough with events where there is strong interaction between Tintin, his friends, Snowy, means of transport, animal or natural disasters. We hope that our passion for Tintin has nevertheless overcome most of these limitations.

Conclusion

Tintin is clearly an extraordinary character whose adventures continue to delight his many readers 85 years after his first appearance. Children and adults alike are enchanted by the globe-trotting adventures of a boy, his dog, and his eccentric companions. It remains for the sober physician to raise a horrified eyebrow at the characters’ insouciant failure to prepare for their hazardous voyages or to manage their many ailments properly. Nevertheless, although a modicum of common sense might spare the characters most of their calamities, it’s actually far more fun to delight in this superhuman spirit who guilelessly journeys abroad effortlessly overcome the many travel-related illnesses and traumatic events we mere mortals face daily.

Disclosure of interest: the authors declare that they have no conflicts of interest concerning this article.

References