Abstract

The impact of litigation and personal injury claim on spine surgery outcome

Objectives
To analyse data from a cohort of spine surgery patients undergoing personal injury claims at the time of treatment and compare their subjective treatment outcomes to a control group of patients not involved in litigation. The study aims to identify potential associations between compensation status and poor prognosis and explore underlying causes of this.

Background
Several studies have identified a link demonstrating a poorer prognosis in surgical patients undergoing litigation than those who aren't. This association has been seen in spinal surgery cohorts and across several other medical specialties. Studies have suggested several reasons for this link including psychological involvement, being employed in a more risky or strenuous job, litigation-related stress, and secondary gain. Whilst the link between litigation and poor prognosis is strong the theories as to why this is the case vary, and many studies have called for more investigation into the nature of these patients and their outcomes.

Methods
A literature review was conducted to assess the current knowledge of how ongoing litigation affects surgical prognosis. The information from this was used to guide statistical analysis of patient data. Data from 3704 patients attending a spine surgery clinic was collected across an 8-year period spanning April 2012 to June 2020. Information regarding the patients self-perceived quality of life and physical abilities was collected as well as their compensation status, with 124 patients involved in a claim. Statistical analysis comparing patients with and without litigation claims was carried out using SPSS Statistics. Independent T-Tests and Chi-Squared tests were used to find significant differences between the groups with P=0.05 being used as the threshold for significance.

Results
Several significant differences were identified between the cohorts. Patients undergoing compensation had a worse self-assessed quality of life as per the EQ-5D grading system than those who were not (p=<0.001). They also demonstrated higher levels of anxiety (GAD-7, p= <0.001) and depression (PHQ-9, P=<0.001). These differences remained at post-treatment follow up (p=0.001)- showing a lack of improvement following surgical or medical intervention.
Furthermore, the litigation cohort reported more severe back pain (p=0.002) and a lower maximum walking distance (p=0.040). Patients undergoing litigation were also more likely to have retired due to their back pain (p=<0.001). conversely, there was no difference in the proportion of the two groups receiving surgical intervention for their

pain (p=0.867). These results clearly demonstrate a worse outcome in the litigation cohort, with increased pain, poorer functional abilities and worse mental health.

Conclusion and recommendation

The results of this study align with the literature by showing litigation as a predictor of poor outcome in spinal surgery. The results demonstrate significantly inferior quality of life and mental health within the litigated patients which persisted post treatment despite comparable surgical intervention rates suggesting that psychological wellbeing may hinder perceived recovery in patients involved in litigation.

The higher reported pain severity and decreased functional capacity by this cohort is also suggestive of psychological involvement.

Like many others this study has found that Anxiety, depression and a poor quality of life are risk factors for litigated patients causing them to have more severe and longer duration pain, and worse functional capacity. Further research could investigate how best to manage these factors to optimise treatment for these patients.

AI declaration

I declare that I have used Generative AI software to support me in producing parts of this work. I have used Gen AI in line with the usage defined by the assessment guidance and have maintained academic integrity throughout my work. I have validated any Gen AI content through using reliable independent sources. I acknowledge my use of AI tools to guide my use of SPSS statistics as this software was new. I used online videos initially to learn how to use SPSS but did at time make use of Chat GPT to troubleshoot when my statistical tests resulted in an error on SPSS.

The impact of litigation and personal injury claim on spine surgery outcome

Olivia Perkins, Michael McCarthy and Stuart James

Objectives

To analyse data from a cohort of spine surgery patients undergoing personal injury claims at the time of treatment and compare their objective treatment outcomes to a control group of patients not involved in litigation. The study aims to identify potential associations between compensation status and poor prognosis and explore underlying causes of this.

Background

Several studies have identified a link demonstrating a poorer prognosis in surgical patients undergoing litigation than those who aren't. This association has been seen in spinal surgery cohorts (1) and across several other medical specialties (2), and has included more severe pain and disability, longer duration of symptoms and less satisfaction from treatment. Studies have suggested several reasons for this link including psychological factors (3) being employed in a more risky or strenuous job (4) the stressful nature of being involved in litigation (5) and secondary gain (6). Few studies have been able to conclusively suggest the reason for this link, and with many litigated patients responding inferiorly to treatments, more research would enable a deeper understanding of how best to care for patients and address their medical needs.

Methods

- A literature review was conducted to assess the current knowledge of how ongoing litigation affects surgical prognosis. The information from this was used to guide statistical analysis of patient data.
- Data from 3704 patients attending a spine surgery clinic was collected across an 8-year period spanning April 2012 to June 2020. Information regarding the patients self-perceived quality of life and physical abilities was collected as well as their compensation status, with 124 patients involved in a claim.
- Statistical analysis comparing patients with and without litigation claims was carried out using SPSS Statistics. Independent T-Tests and Chi-Squared tests were used to find significant differences between the groups with P=0.05 being used as the threshold for significance.

Acknowledgments

I would like to thank Mr Mccarthy and Mr James for their guidance and support and for providing an engaging and enjoyable project.

Results

Several significant differences were identified between the cohorts. Patients undergoing compensation had a worse self-assessed quality of life as per the EQ-5D grading system than those who were not (p=<0.001). They also demonstrated higher levels of anxiety (GAD-7, p= <0.001) and depression (PHQ-9, P= <0.001).

Figure 1

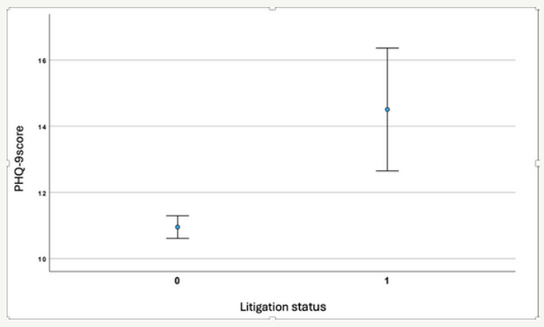

Figure 2

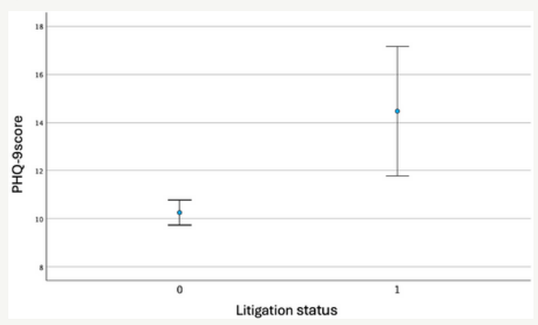

Figure 1. shows the PHQ-9 scores (measure of depression severity) for the litigated and non litigated cohorts.
Figure 2. shows the same data but from patients' first follow up post treatment

These differences remained at post-treatment follow up (p=0.001)- showing a lack of improvement following surgical or medical intervention.
Furthermore, the litigation cohort reported more severe back pain (p=0.002) and a lower maximum walking distance (p=0.040). Patients undergoing litigation were also more likely to have retired due to their back pain (p=<0.001).

Figure 3

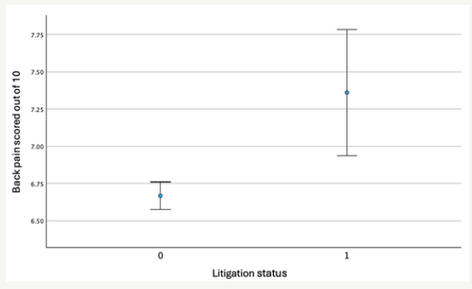

Figure 4

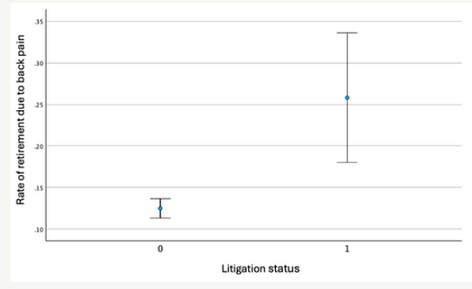

Figure 3. shows patient's rating of their back pain out of 10
Figure 4. shows the rate of retirement due to back pain in litigated and non-litigated patients

Conversely, there was no difference in the proportion of the two groups receiving surgical intervention for their pain (p=0.867). These results clearly demonstrate a worse outcome in the litigation cohort, with increased pain, poorer functional abilities and worse mental health.

Discussion

The results of this study align with the literature by showing litigation as a predictor of poor outcome in spinal surgery. The results demonstrate significantly inferior quality of life and mental health within the litigated patients which persisted post treatment despite comparable surgical intervention rates suggesting that psychological wellbeing may hinder perceived recovery in patients involved in litigation.
The higher reported pain severity and decreased functional capacity by this cohort is also suggestive of psychological involvement.
Like many others this study has found that Anxiety, depression and a poor quality of life are risk factors for litigated patients causing them to have more severe and longer duration pain, and worse functional capacity. Further research could investigate how best to manage these factors to optimise treatment for these patients.

references

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