

**Short Communication**
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## Is Consenting for Blindness in Prone Spinal Procedures Relevant?

Balaji Douraiswami<sup>1\*</sup>, Mohammad Baraka<sup>2</sup>, Ardalan Zolnourian<sup>3</sup>, Ali Nader-Sepahi<sup>4</sup>, Emad Shenouda<sup>4</sup> and Chris Dare<sup>4</sup>

<sup>1</sup>Senior Spine Fellow, Department of Complex Spine Surgery, Southmead Hospital, North Bristol NHS Trust, UK

<sup>2</sup>Senior Spine Fellow, Department of Spine Surgery, Southampton General Hospital, Neurosurgery Lecturer, Kasr Alainy Faculty of Medicine, Cairo University, Egypt

<sup>3</sup>Neurosurgical Trainee, Southampton General Hospital, NHS Southampton, UK

<sup>4</sup>Spinal Consultant, Southampton General Hospital, NHS Southampton, UK

**\*Corresponding author**

Balaji Douraiswami, Senior Spine Fellow, Department of Complex Spine Surgery, Southmead Hospital, North Bristol NHS Trust, UK.

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Prone position is commonly used in spinal surgery as well as other specialties. The associated complications with this are well-documented within the literature [1]. Informed consenting process for prone spinal operations should entail listing the benefits of the proposed surgical procedure as well as the known complications. The commonly quoted complications by the spinal surgeons are infection, CSF leak, bleeding including major vascular injury [2]. Neurological deficit, bladder, bowel and sexual dysfunction, spinal instability, need for revision, stroke, deep vein thrombosis and pulmonary embolism. Less commonly mentioned, although known position-related complications include pressure sores affecting chest wall, breasts, head, neck and face, nerve palsies, abdominal compartment syndrome, lower limb compartment syndrome, cardiovascular compromise and hepatic dysfunction due to prolonged raised central venous pressure and blindness. In particular, blindness although uncommon, is irreversible and it has a devastating long-term functional consequence for the patients. It is therefore of great significance and importance. In addition, failure to include this rare complication in the consent forms could have significant medico-legal ramifications. This letter is a comment on the current practice of consenting patients for prone spinal procedures.

Sixty-seven percentage of all Post Operative Visual Loss (POVL) is reported to be secondary to prone spinal procedures. The overall incidence is estimated to be 0.01-1%. It is more commonly observed in long segment spinal fusions with the reported rate of 1.9 cases in 10,000 surgeries [3]. The most common cause attributed to it is Ischaemic Optic Neuropathy (89% of cases). Other causes include central retinal artery and vein occlusion, cortical blindness, direct compression, and acute angle closure glaucoma [4].

Risk factors like Diabetes, Obesity, Glaucoma and hypertension further compound the chances of post operative blindness [5]. These risk factors are becoming increasingly common in the

western society and their associated medical problems need special awareness. Much of this complication could be prevented by safe and proper positioning - usage of Mayfield clamps to avoid pressure on the eyes and maintain neutral head position, 10 degrees reverse trendelenburg tilt, arterial line access to monitor and treat hypotension [6].

In an attempt to identify any areas of improvement in our practice, we audited documenting 'blindness' as a risk following prone spinal procedures on consent forms. A cross section of consent forms between November 2020 and January 2021 were reviewed. Due to COVID, there was a significant reduction in the number of surgeries performed. Our theatre logbooks and theatre planning spreadsheets were thoroughly reviewed to ensure all patients have been included. Out of 167 procedures, only 19 were consented for blindness (11.37%). After presentation of the results in our local departmental spinal meeting, this was re audited after 8 weeks. The percentage of consent forms with blindness included in them increased significantly by over 25%; 42 out of 108 (38.88%). Although there was no reported POVL/blindness in this period, this topic remains extremely important to the health care professionals.

Our audit suggests that creating awareness of this complication has resulted in a substantial increase in the documentation of 'blindness' in the consent forms for prone spinal surgeries. Though the rate remains below 50%, with further education and practice, the numbers could improve. In a pilot study at Mayo clinic involving 219 patients, 80% responded positively on full disclosure and informed consent regarding POVL in prone spinal procedures [7].

In conclusion, whilst all efforts should be undertaken to prevent this devastating complication, inclusion in the consent form is of vital importance as it can remind the physicians about the need for appropriate positioning and additionally it would prevent medicolegal repercussions. We call for international spine community to provide strict and clear guidelines and or statement

for consenting prone spinal procedures in order to ensure spinal surgeons pay particular attention in documenting relevant and important details in the consent forms.

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