Quiz – Additional Information for Residents

1. Considering the fixation of the axis, which one is the wrong answer:
   (a) Wiring techniques have a higher rate of pseudoarthrosis compared with screw fixation techniques
   (b) Screw fixation provides immediate stability
   (c) Pedicle and pars of the axis are the same anatomical structures
   (d) The pars interarticularis is the portion between the inferior and the superior facets of the axis

2. Considering laminar screws, which one is the wrong affirmative:
   (a) Laminar screws offer a high risk of vertebral artery injuries
   (b) Generally, laminar screws are inserted using a free hand technique
   (c) Head connectors may be used to facilitate the connection of the laminar screws to the rods
   (d) Laminar screws may be used for both children and adult patients in the vast majority of the cases, except when laminectomy is performed.

3. Considering pars screws, which one is the wrong affirmative:
   (a) The entry point is similar to that of transarticular screws.
   (b) Screws are shorter compared with pedicular screws
   (c) In adults, a screw of up to 14 mm length can be used in the majority of the cases.
   (d) There is no risk of vertebral artery injury with this technique

4. Considering transarticular screws, which one is the wrong affirmative:
   (a) Biplanar fluoroscopy is recommended for screw insertion
   (b) About 50% of the patients are not able to receive transarticular screws due to a more medial located vertebral artery
   (c) An additional skin incision may help in the angulation of the screw
   (d) A normal alignment of the C1–2 joint is necessary prior to screw insertion

5. Considering pedicular screws, which one is the wrong affirmative:
   (a) Medial violation may result in spinal cord injury
   (b) Lateral violation may result in vertebral artery injury
   (c) The medial location of the vertebral artery makes this technique safer
   (d) It is probably the strongest technique from a biomechanical point of view

Answers:
Q1 – C
Q2 – A
Q3 – D
Q4 – B
Q5 – C