SNAGGED ROPE INCIDENT – FALLING PERSON

Two sets of anchor lines were rigged by a Level 3 rope access technician from the roof of a building and then thrown down to the lower of two balconies. From the lower balcony, the plan was for two technicians to pull the ropes coming down from the roof, to remove any slack rope above and feed the remainder to the bottom with rope protectors or deviations as necessary. From this lower balcony the Level 2 and Level 3 technicians would start their parallel descents. The Level 2 technician maintains he was suspended for a short time whilst getting ready to descend, before he suddenly dropped 12-15 metres with minor impacts en route, coming to a stop on his descender, just 2metres from the bottom. The Level 3 technician descended quickly and was able to release the casualty by standing on a structure near the bottom. The casualty was taken to hospital, but suffered no broken bones.

Incident analysis/ control measures

- The technicians had apparently done this descent many times previously without mishap. The Level 2 apparently pulled on his anchor lines and thought they were OK before committing himself to the abseil. The only explanation is that the ropes had accumulated at some point above the second balcony and snagged initially before releasing suddenly.
- Ideally anchor lines should be visually checked to ensure there is no build up of slack between the anchors and access point that could become snagged and release suddenly. In this case it is not possible to see the upper or lower balcony from the roof top area and from the lower balcony position it is not possible to see the upper balcony area.
- If someone had checked at the bottom, it should have been possible to see if both the anchor lines reached bottom and similar lengths were down.
- Checks were not carried out on the ropes as they passed the upper balcony level where it is likely they were snagged. A visual check from the top was impossible, but by positioning someone at the top and the other at either balcony or at the bottom, it should have been possible by each alternately shaking or pulling the ropes to determine if there was any slack between them.
- Adequate communications for this checking is necessary.
- The casualty was extremely fortunate that the slack in the system was not greater, other wise he would have hit the floor. The fall factor is estimated to have been about 0.5, though it is also possible there may have been some edge friction to contribute to energy absorption as well as rope elongation.

Conclusion / Lesson to learn:
A potentially fatal incident, due to failure of the rope access technicians to check that there was no build up of slack between the anchors and their access point that could become snagged and release suddenly.

Not directly relevant in this case.

When attaching to anchor lines at mid-height or with a long length from the anchor point to the access point; rope elongation needs to be considered. Previously unloaded ropes will stretch suddenly, allowing a technician to drop a distance proportional to the length of rope above, with potential for impact injury. In order to be safe there should be suitable anchors at mid-height for the technician to attach to, while the rope above is tensioned to remove slack.

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