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The Australian Society for Motorsports Medicine and Rescue

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Race control

There have been long gaps between newsletters this year as I've worked on a number of projects, including the ASMMR website. The setup work has all been done now, so hopefully it will be easier to keep things ticking over next year.

This newsletter keeps the clinical section short for a change and addresses a couple of aspects of airway management. There is a wrap up of the main categories for this year and a few items of general motorsport interest follow on. Finally, the firey aspects of the 2011 season of V8 Supercars Australia are displayed in the "Caught by the Cameras" section.

Have a good Christmas.

Good luck.

Matthew Mac Partlin

<http://asmmr.yolasite.com/>



Clinical review – Critical care literature abstracts

From Dr. Cliff Reid's Resus.ME website
(<http://resusme.em.extrememember.com/>)

Difficult prehospital endotracheal intubation – predisposing factors in a physician based EMS. Resuscitation 2011 Dec;82(12):1519-24.

A European study that attempted to identify factors that influenced the difficulty of pre-hospital, physician conducted intubation. Along with the usual patient features that have previous been identified, such as obesity, limited mouth opening, maxillo-facial injury and short neck, the other main factor contributing to a difficult intubation was poor scene control, particularly limited space surrounding the patient.

This paper is related to another published in 2009 (Emerg Med J. 2009 Mar;26(3):213-6. Introduction to the "space-control theory of paramedic scene management". Campeau A.) that attempted to identify how senior paramedics established control over their work space as compared to less experienced colleagues.

These papers highlight the difficulty that can be experienced by hospital practitioners who try to apply hospital-based protocols and practices to pre-hospital environments. There are several aspects to consider when trying to manage a critically injured patient in a dangerous arena including the ongoing race on a live circuit nearby, spectators trying to get a better view of the incident, officials crowding around in an attempt to be helpful and bits of broken car, fuel and brake fluid spill and dislodged pieces of tyre wall or armco barrier. The papers highlight the mix of skills that individuals bring to the medical and rescue team at motorsports events and the value of experience and time spent practicing the craft. Anyone interested in medical service provision at motorsports events, or indeed any other kind of outdoor event, would do well to do a pre-hospital management course or at least read around the area.

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From Scott Weingart's EM Crit website
(<http://emcrit.org/>)

There is an interesting debate between Dr. Scott Weingart, of EM Crit website fame, and Dr Paul Mayo on the role of neuromuscular blocking agents when performing an RSI. Dr. Mayo uses a recently published trial that he was an author for to argue that sedation-only RSI is as safe as traditional RSI using Sux or Roc in the management of the urgent intubation of a non-anaesthetic population of critically ill patients. His argument for preferring sedation-only RSI is that a spontaneously breathing patient is always better off than a paralysed one, who is exposed to the risk of “can't intubate, can't ventilate”.

This type of trial has been done ad nauseam in anaesthetics papers and persistently demonstrates that sedative-only RSI performs worse than an RSI that involves the use of a neuromuscular blocking agent (NMB).

Dr. Mayo quotes results that show an equivalent incidence of complications such as death, oesophageal intubation, dental injury and aspiration and states that all 400 intubations were successful. However, there are a few riders. The team performing the RSI consisted of 2 interns

whose only task was to provide 2-person BVM, a critical care fellow whose only task was to intubate and an observer who kept an eye on the proceedings and patient vitals (It turns out that this observer was in fact the attending, or consultant – it was a US trial). A 42-point checklist was performed from memory by the intubating critical care fellow prior to proceeding. The team members all received intensive, high-fidelity simulation training prior to clinical intervention. Additionally, the sedative was propofol and was given in graded increments with co-administration of a vasopressor as required or in anticipation of hypotension.

So, the trial did not in fact assess the performance of a single intervention, but rather an integrated approach. While advocated for the “urgent endotracheal intubation”, it remains quite resource heavy and suggests that there was at least a bit of time available before needing to site the tube. It is also arguable as to whether all of the eventual intubations could really be classified as successful. While all of the patients were ultimately intubated, 10% were initially oesophageal. Furthermore, the incidence of desaturation to $SpO_2 < 80\%$ (11%) and of the need for 3 or more attempts (i.e. difficult intubation – 21%) is fairly uncomfortable.

This is not to say that sedative-only RSI cannot be done, it can and is in appropriate circumstances, but it is not a strong enough study to say that sedation-only RSI is better than traditional RSI and should be the new first line approach. It also does not reflect the resources typically available at most motorsport events. For the foreseeable future, at least, the use of an NMB will remain part of an RSI procedure at a critical incident by the side of the race track.

What may be interesting is the replacement of suxamethonium, with all of its attendant problems, by an RSI dose of Rocuronium (1.2 – 1.4mg/kg) which has an equivalent onset time to sux. The argument that Sux has a shorter duration of effect, providing a safety element in the event of “can't intubate, can't ventilate”, is being increasingly rejected on two counts. First is the issue that in the critical care scenario, unlike the elective anaesthetic scenario, the patient is being intubated for a problem that will not have resolved when the RSI agents do. So aborting an attempt to secure a definitive airway is unlikely to be a realistic strategy. If the ET tube won't go in and the LMA fails and you cannot ventilate the patient adequately, forget about waking them up; it's cricothyroidotomy time. Secondly, if you really do want to abort Rocuronium's effect, Sugammadex is now available.

If you want to listen to the debate, go here: <http://emcrit.org/podcasts/paralytics-for-icu-intubations/#comment-5161>



Recent race results

Formula 1

Sebastian Vettel has proven his talent, taking out the 2011 F1 Driver's Championship for the second time in a row. He also completed the year equaling Nigel Mansell's record of most number of pole positions in a single season. Additionally, he has demonstrated impressive maturity for such a young professional driver, during both on and off track incidents. And as a genuinely nice guy, he is a deserving winner. The other drivers who impressed during the 2011 season were Jensen Button, who showed his skills as a driver and a tactician, and Paul DiResta who drove well for Force India

and may be someone to watch over the next 2 years.

Red Bull were again the team to beat, though McLaren and Ferrari clawed their way back into contention in the second half of the year. Ferrari's Fernando Alonso reckons the battle will be closer next year.

<u>Driver's championship</u>		<u>Manufacturer's championship</u>
1 Sebastian Vettel, RBR-Renault: 392	12 Kamui Kobayashi, Sauber-Ferrari: 30	1 RBR-Renault 650
2 Jenson Button, McLaren-Mercedes: 270	13 Paul di Resta, Force India-Mercedes: 27	2 McLaren-Mercedes 497
3 Mark Webber, RBR-Renault: 258	14 Jaime Alguersuari, STR-Ferrari: 26	3 Ferrari 375
4 Fernando Alonso, Ferrari: 257	15 Sebastien Buemi, STR-Ferrari: 15	4 Mercedes 165
5 Lewis Hamilton, McLaren-Mercedes: 227	16 Sergio Perez, Sauber-Ferrari: 14	5 Renault 73
6 Felipe Massa, Ferrari: 118	17 Rubens Barrichello, Williams-Cosworth: 4	6 Force India-Mercedes 69
7 Nico Rosberg, Mercedes: 89	18 Bruno Senna, Renault: 2	7 Sauber-Ferrari 44
8 Michael Schumacher, Mercedes: 76	19 Pastor Maldonado, Williams-Cosworth: 1	8 STR-Ferrari 41
9 Adrian Sutil, Force India-Mercedes: 42	All remaining drivers: 0 points	9 Williams-Cosworth 5
10 Vitaly Petrov, Renault: 37		10 Lotus-Renault 0
11 Nick Heidfeld, Renault: 34		11 HRT-Cosworth 0
		12 Virgin-Cosworth 0

F1 GP 2012 calendar

Australian Grand Prix (Melbourne)	16 - 18 Mar
Petronas Malaysia Grand Prix (Kuala Lumpur)	23 - 25 Mar
UBS Chinese Grand Prix (Shanghai)	13 - 15 Apr
Gulf Air Bahrain Grand Prix (Sakhir)	20 - 22 Apr
Gran Premio de España Santander (Catalunya)	11 - 13 May
Grand Prix de Monaco (Monte Carlo)	24 - 27 May
Grand Prix du Canada (Montréal)	08 - 10 Jun
Grand Prix of Europe (Valencia)	22 - 24 Jun
Santander British Grand Prix (Silverstone)	06 - 08 Jul 10
Grosser Preis Santander von Deutschland (Hockenheim)	20 - 22 Jul
Formula 1 Eni Magyar Nagydíj 2012 (Budapest)	27 - 29 Jul
Shell Belgian Grand Prix (Spa-Francorchamps)	31 Aug - 02 Sep
Gran Premio Santander d'Italia 2012 (Monza)	07 - 09 Sep
Singtel Singapore Grand Prix (Singapore)	21 - 23 Sep
Japanese Grand Prix (Suzuka)	05 - 07 Oct
Korean Grand Prix (Yeongam)	12 - 14 Oct
Airtel Grand Prix of India (New Delhi)	26 - 28 Oct
Etihad Airways Abu Dhabi Grand Prix (Yas Marina Circuit)	02 - 04 Nov
United States Grand Prix (Austin)	16 - 18 Nov
Grande Prêmio do Brasil (São Paulo)	23 - 25 Nov

World Rally Championship

Another good year for Sebastian Loeb and, despite rumours of his sounding out other racing formats, he is still on Citroen's contract for 2012. Unlike his team mate Ogier, with whom he had a fairly large stoush with in the second half of the season, who will join the new Volkswagen WRC team, in a factory Skoda Fabia Super 2000 (and therefore will not be in the running for the WRC Championship) for 2012. The Volkswagen team are planning to bring out their works Polo R in 2013. Ogier ended this year in third position in the WRC, but took out first place in the Race of Champions in Germany at the start of December.

<u>Driver's championship</u>		<u>Manufacturer's championship</u>
1. Sebastien Loeb, Citroen Total - 222 2. Mikko Hirvonen, Ford Abu Dhabi - 214 3. Sebastien Ogier, Citroen Total - 196 4. Jari-Matti Latvala, Ford Abu Dhabi - 172 5. Petter Solberg, Petter Solberg Racing - 110 6. Mads Østberg, M-Sport Stobart Ford - 88	7. Matthew Wilson, M-Sport Stobart Ford - 63 8. Dani Sordo, MINI - 59 9. Henning Solberg, M-Sport Stobart Ford - 59 10. Kimi Raikkonen, ICE1 Racing - 34 11. Kris Meeke, MINI - 25 12. Dennis Kuipers, Ferm Power Tools Rally Team Ford Fiesta - 21	1 Citroen Total World Rally Team 2 Ford Abu Dhabi World Rally Team 3 M-Sport Stobart Ford Rally Team 4 Petter Solberg World Rally Team 5 FERM Power Tools World Rally Team 6 Team Abu Dhabi

WRC 2012 Calendar

Rallye Monte-Carlo	17 - 22 Jan
Rally Sweden	09 - 12 Feb
Rally Mexico	08 - 11 Mar
Rally Portugal	29 Mar - 01 Apr
Rally Argentina	27 - 29 Apr
Acropolis Rally	25 - 27 May
Rally of New Zealand	22 - 24 Jun
Rally Finland	02 - 05 Aug
Rallye Deutschland	24 - 26 Aug
Rally of Great Britain	13 - 16 Sep
Rallye de France – Alsace	04 - 07 Oct
Rally d'Italia	18 - 21 Oct
Rally de España	08 - 11 Nov

V8 Supercars

<u>Driver's championship</u>		<u>Manufacturer's championship</u>
1. Jamie Whincup 3168 2. Craig Lowndes 3133 3. Mark Winterbottom 2710	6. Rick Kelly 2358 Steven Johnson 1345 7. Will Davison 2345	1. Team Vodafone 2. FPR – Orrcon Steel & Trading Post

4. Shane van Gisbergen 2672 5. Garth Tander 2549 Jason Bright 920	8. Lee Holdsworth 1920 9. Tim Slade 1904 10. James Courtney 1869	3. Stone Brothers Racing 4. Toll Holden Racing 5. Jack Daniel's Racing
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V8 Supercar Calendar 2012

March 1-4:	Clipsal 500	Adelaide
March 15-18:	Australian Grand Prix Albert Park	Melbourne
March 30-April 1:	Tasmanian Challenge Symmons Plains	Launceston
April 20-22:	ITM400 Hamilton	New Zealand
May 4-6:	Trading Post Challenge Barbagallo	Perth
May 18-20:	Phillip Island	Phillip Island, Victoria
June 15-17:	SKYCITY Triple Crown Hidden Valley	Darwin
July 6-8:	Sucrogen Townsville 400	Reid Park, Townsville
August 3-5:	Coates Hire Ipswich 300	Queensland Raceway, Ipswich
August 24-26:	Winton	Winton, Victoria
September 14-16:	Sandown 500	Sandown, Victoria
October 4-7:	Supercheap Auto Bathurst 1000	Bathurst, New South Wales
October 19-21:	Armor All Gold Coast 600	Gold Coast, Queensland
November 2-4:	Yas V8 400	Yas Marina, Abu Dhabi
November 9-11:	TBA – No race as yet confirmed	
November 30-Dec 2:	Sydney Telstra 500	Olympic Park, Sydney

MotoGP

Valentino Rossi, not content with being a world dominating MotoGP rider, placed second behind Sebastian Loeb at the Monza Rally Show in a WRC Ford Fiesta RS at the end of November. The field of competitors included previous WRC, IRC, European Rally Championship and 24-Hour Le Mans winners.

1. Casey Stoner, Repsol Honda Team - 350 2. Jorge Lorenzo, Yamaha Factory Racing - 260 3. Andrea Dovizioso, Repsol Honda Team - 228 4. Dani Pedrosa, Repsol Honda Team - 219 5. Ben Spies, Yamaha Factory Racing - 176 6. Marco Simoncelli, San Carlo Honda Gresini - 139	7. Valentino Rossi, Ducati Marlboro Team - 139 8. Nicky Hayden, Ducati Marlboro Team - 132 9. Colin Edwards, Monster Yamaha Tech 3 - 109 10. Hiroshi Aoyama, San Carlo Honda Gresini - 98 11. Héctor Barberá, Mapfre Aspar Team - 82	12. Cal Crutchlow, Monster Yamaha Tech 3 - 70 13. Álvaro Bautista, Rizla Suzuki MotoGP - 67 14. Karel Abraham, Cardion AB Motoracing - 64 15. Toni Elías, LCR Honda MotoGP - 61 16. Randy de Puniet, Pramac Racing Team - 49
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MotoGP Calendar 2012

15 April	Qatar - Doha/Losail
29 April	Spain (STC) - Jerez de la Frontera
6 May	Portugal (STC) - Estoril
20 May	France - Le Mans
3 June	Catalunya - Catalunya
17 June	Great Britain - Silverstone
30 June	Netherlands - Assen
8 July	Germany (STC) - TBC
15 July	Italy - Mugello
29 July	United States - Laguna Seca
19 August	Indianapolis - Indianapolis
26 August	Czech Rep. - Brno
16 September	San Marino & Riviera di Rimini - Misano
30 September	Aragon - Motorland
14 October	Japan - Motegi
21 October	Malaysia - Sepang
28 October	Australia - Phillip Island
11 November	Valencia - Ricardo Tormo – Valencia

Australian Rally Championship

A tight season finished on a knife edge, with the winner decided on the last stage of the last event. Justin Dowel wasn't told about Ryan Smart's ruined tyres causing dreadful understeer and thought he had finished in second position until Ryan limped across the finish line.

<u>Driver's championship</u>		<u>Co-Driver championship</u>
1. Justin Dowel: 340.5	6. Tom Wilde: 158	1. Matt Lee: 340.5
2. Ryan Smart: 327.25	7. Charlie Drake: 148.5	2. John Allen: 327.5
3. Steven Sheppheard: 199.5	8. Derek Reynolds: 117.5	3. John McCarthy: 199.5
4. Mark Pedder: 186	9. Mick Patton: 106.75	4. Lee Tienrey: 186
5. Eli Evans: 175	10. Simon Knowles: 105.5	5. Glen Weston: 175

ARC Calendar 2012

Rally Calder (VIC)	1st - 4th March
Quit Forest Rally (WA)	31st March - 1st April
International Rally of Queensland (QLD)	26th - 27th May
Scouts Rally SA (SA)	28th - 29th July
Coffs Coast Forest Rally (NSW)	13th - 14th October
Rally Victoria (VIC)	9th - 10th November



Motorsports news

At the age of 83 and after 50 years of work with motor sports, Professor Sid Watkins has retired from his position as President of the FIA Institute, which was established in October 2004. Prof Watkins has been a leading light in the field of motor sports medicine and is credited with many safety initiatives in Formula 1, rally, touring cars and karting. To mark his massive contributions, he was recently awarded the FIA Academy Gold Medal, had a bronze bust presented to him at the FIA AGM in New Dehli and was elected as the first Honorary President of the FIA Institute. For a review of his motor sports career and inputs, read the FIA Institute tribute here: <http://www.fiainstitute.com/news/Pages/article-999999996.aspx>

Prof Watkins has been succeeded by Prof Gerard Saillant, the former Deputy President. Prof Saillant is, in turn, succeeded as Deputy President by Mr Gary Connelly, previously an executive committee member. Biography's of the FIA Institute executive members are available here: <http://www.fiainstitute.com/about/Pages/executive.aspx>

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The Circuit of the Americas has gone all out in its bid to secure a spot on the F1GP calendar. And it has worked. For a while it looked as if they had run in to trouble and work on the purpose-built race complex, that includes a 5.5km circuit, a dedicated medical facility and a number of executive and business facilities, had been ceased. With confirmation of its position on November 18, 2012, work has resumed. The circuit, located in Austin, Texas, will not be restricted to F1 and will cater for a variety of motor sport races, as well as non-motor sports events, such as concerts and conferences. To read more about it, go here: www.CircuitofTheAmericas.com

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The V8 Supercars Cars of the Future were unveiled at the Telstra 500 in Olympic Park at the start of December. They include a number of weight-reducing, stability improving and cost saving developments that, so far, have been approved by the drivers that have had a go in them. Having had a chat with one of the engineers involved in their build, they still have a quick release steering wheel and quick release doors. They will also have a collapsible steering column, reinforced side impact protection without any further restriction of access to the driver and a new fire suppression system. The fuel bladder has been brought into the main chassis for greater protection from impact rupture, as occurred this year in the Karl Reindler / Steve Owen collision at Barbagello or David Besnard's fire when he struck the wall at the Bathurst 1000. The engine has been move forward by 100mm, giving a little room in a front on collision. For more information, go here: <http://www.v8supercars.com.au/Technical/CaroftheFuture/TheNewGenerationOfV8Supercars/tabid/1418/Default.aspx>



Caught by the cameras



Steve Owen runs into the rear of Karl Reindler's stalled Holden on the grid at Barbagello raceway this year. Both drivers escaped serious injury, though Karl sustained burn injuries to his hands and face.



David Besnard leaks fuel which catches fire after he struck the wall at Bathurst with his rear left quarter panel, rupturing the fuel bladder. Two fire marshals were quickly on the scene to douse the flames.

