

OCTOBER 14-16th 2018

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AVM 2018

4th World Congress

MONTREAL, October 14-16

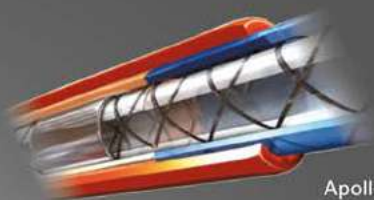
FINAL PROGRAMME

Centre Mont-Royal
2200 Mansfield Street
Montreal, Quebec, H3A 3R8
www.avm2018.org

4th
WORLD AVM
CONGRESS

YOUR PARTNER
IN AVM
TREATMENT

THE
ADVANTAGE
OF TIME.
**THE POWER
OF CONTROL.**

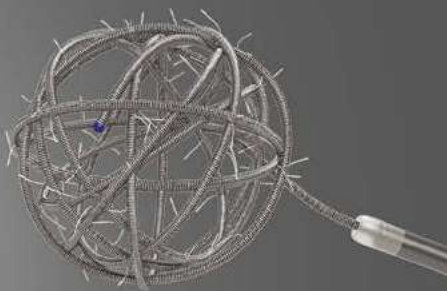


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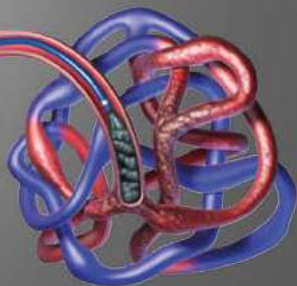


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Medtronic
Further, Together

Following Edinburgh (2012), Nancy (2014) and Napa (2016), the 4th world congress on brain AVMs will now be held in Montreal, Quebec, CANADA, on October 14-16th 2018.

Just a few days away from the AVM meeting in Montreal, we, the Organizing Committee, are frantically fine-tuning last minute details and cheerfully anticipating your coming to Montreal, October 14th-16th 2018. This meeting is above all a gathering of people, hearts and brains passionately involved in CNS vascular malformations.

Central features of this year's meeting include:

- The venous route to brain AVMs
- How did it all start, and where are we going?
- Advanced imaging in the clinical management of AVMs
- Spinal cord and posterior fossa AVMs
- Complications, Clinical research and the Future

More than 100 abstracts from all over the world will be presented as oral or poster presentations. Morbidity/mortality sessions, breakfast anatomy seminars, lunch seminars, mini-symposia, debates and special events will complete a scientific program gathering world-recognized CNS AVM experts.

We thank the hundreds of persons that are making this meeting a memorable event.

Montreal is a special place for networking with peers, meeting old friends and for making new ones. It is particularly lovely in October when trees flower before the difficult winter months. Why not take a few more days to enjoy the beauty of nature?

You are all welcome to share with us beauty, friendship and eagerness to explore and learn together!

The Organizing Committee

Organizing committee

Jean RAYMOND, Canada
Daniel ROY, Canada

Local committee

Michel BOJANOWSKI, Canada
Chiraz CHAALALA, Canada
Dana IANCU, Canada
David MATHIEU, Canada
David ROBERGE, Canada
Christian STAPF, Canada
Alain WEILL, Canada

International committee

Alejandro BERENSTEIN, USA
Serge BRACARD, France
Tim DARSAUT, Canada
Jean-Christophe GENTRIC, France
Emmanuel HOUDART, France
Ling FENG, China
Michael LAWTON, USA
Elsa MAGRO, France
David M. PELZ, Canada
Georges RODESCH, France
Gary STEINBERG, USA

Industry sponsored sessions

Monday October 15, 2018

10:00-10:30 4D Angiography Revolution in Cerebrospinal Malformations
Théâtre Symposia *Saruhan CEKIRGE, TURKEY*

SIEMENS
Healthineers

11:00-11:30 Technical and clinical highlights on PHIL liquid Embolic
Salon International 1&2

Moderator: Mats CRONQVIST, SWEDEN

PHIL Technology At Glance - Presented by MicroVention, Inc.

PHIL DAVF Study - Anne-Christine JANUEL, FRANCE

PHIL AVM Study - Markus HOLTMANNSPÖTTER, DENMARK

MicroVention
TERUMO

Tuesday October 16, 2018

09:30-10:00 SQUID liquid embolic review, French experience
Théâtre Symposia **Cerebral AVM treatment with Squid liquid embolic: Preliminary French experience**
Jean-Christophe GENTRIC, FRANCE

Squid 12: Lower-viscosity non-adhesive embolic agents for cerebral AVM treatment
Raphaël BLANC, FRANCE

balt
inspiring innovation

Sunday October 14, 2018

CING MEETING Salon International 1&2

08:00-13:00 The Canadian Interventional neuro-group welcomes all meeting participants to bring AVM cases for small group discussions

08:00-09:00 Breakfast in conference room
09:00-10:00 Case presentations (AVM cases)
10:15-10:30 Coffee Break
10:30-12:00 Case presentations (AVM cases)
12:00-13:00 Lunch

AVM CONGRESS OPENING Hall Symposia

11:00 AVM Registration

WELCOMING TALK Théâtre Symposia

13:00-13:05 Jean RAYMOND, CANADA

PLENARY SESSION Théâtre Symposia

13:05-13:35 Brain AVMs
Moderators: Serge BRACARD, FRANCE
Gary STEINBERG, USA

13:05-13:15 Developmental biology and genetic basis of AVM of the brain - Ivan RADOVANOVIC, CANADA
13:15-13:25 Best Science of Brain AVMs 2016-2018
Su HUA, USA
13:25-13:35 Is the AVM truly an AVM?
Alejandro BERENSTEIN, USA

FREE PAPERS Théâtre Symposia

13:35-14:45 Unruptured brain AVMs
Moderators: Alejandro BERENSTEIN, USA
Thanh NGUYEN, USA

13:35-13:43 **0-01** Stereotactic radiosurgery as first-line treatment for non-hemorrhagic arteriovenous malformations in the pre-ARUBA era
Nicolas REYNS, FRANCE
13:45-13:53 **0-02** Treatment Patterns of Arteriovenous malformations before and after ARUBA
Karen CHEN, USA
13:55-14:03 **0-03** Outcomes Associated with Treatment of Unruptured Cerebral Arteriovenous Malformations - Juan TEJADA, USA
14:05-14:13 **0-04** Multi-modal Brain AVM Treatment: A 12 Year Experience and Comparison of Key Outcomes to the ARUBA Trial
James RABINOV, USA
14:15-14:23 **0-05** Long-Term Outcomes in Unruptured Brain Arteriovenous Malformation Patients: the Multicenter Arteriovenous Malformation Research Study (MARS) - Helen KIM, USA
14:25-14:35 What should patients know about unruptured brain AVMs - Emmanuel HOUDART, FRANCE
14:35-14:45 Round table discussion

WORKSHOP Théâtre Symposia

14:45-15:45 The venous route to AVM's
Moderators: Hongqi ZHANG, CHINA
Daniela IANCU, CANADA

Speakers: René CHAPOT, GERMANY
Charbel MOUNAYER, FRANCE

14:45-14:55 Primary venous or arterial reduction first?
14:55-15:05 "Porcelain vein" or venous occlusion first?
15:05-15:15 Single or multiple veins?
15:15-15:23 **0-06** How safe and effective is the retrograde venous approach for the treatment of brain AVMs?
Michel PIOTIN, FRANCE
15:23-15:45 Round table on Venous route
René CHAPOT, GERMANY - Charbel MOUNAYER, FRANCE - Edoardo BOCCARDI, ITALY - Michel BOJANOWSKI, CANADA - Saruhan CEKIRGE, TURKEY - Michael LAWTON, USA - Vitor MENDES PEREIRA, CANADA - Michel PIOTIN, FRANCE

COFFEE BREAK Foyers Cartier & International

15:45-16:15 Meet the industry

GRAND CONFERENCE Théâtre Symposia

16:15-16:45 To see or not to see the brain is the question!

Introduction - Alain WEILL, CANADA
Sylvie Chokron, FRANCE

PLENARY SESSION Théâtre Symposia

16:45-17:45 Dodi-Morbidity-Dodi-Mortality rounds
Animators: Edoardo BOCCARDI, ITALY
Anne-Christine JANUEL, FRANCE

17:45-18:45 How did it all start? Where are we going?

18:45-19:45 A Welcome Cocktail and Special Event with Chuck Kerber, Luc Picard, Steve Lownie, Jacques Dion and so many others
Foyers Cartier & International

Monday October 15, 2018

NEUROSURGICAL ANATOMY Salon Cartier 1&2

- 07:30-08:30 Breakfast Anatomy Refresher**
Course: Spinal cord AVM's
Animators: Robert SPETZLER, USA
Tim DARSAUT, CANADA

NEUROVASCULAR ANATOMY Salon International 1&2

- 07:30-08:30 Breakfast Anatomy Refresher**
Course: Spinal cord AVM's
Animator: Georges RODESCH, FRANCE

PLENARY SESSION Théâtre Symposia

- 08:45-10:00 Advanced Imaging In Brain AVMs**
Moderators: Gary Redekop, CANADA
François GUILBERT, CANADA

- 08:45-08:53 **Inflammation imaging in brain AVMs**
Charles C. MATOUK, USA
- 08:55-09:03 **MR Imaging in CNS AVMs: A user's opinions**
Emmanuel HOUDART, FRANCE
- 09:05-09:13 **4D-CTA in CNS AVMs**
Arun CHANDRAN, UNITED KINGDOM
- 09:15-09:23 **Inter-observer reliability of 4D-DSA**
Jean-Christophe GENTRIC, FRANCE
- 09:25-09:33 **Optimal imaging per-embolization**
Raphaël BLANC, FRANCE
- 09:35-09:43 **Optimal timing and imaging modality in ruptured AVMs**
Vitor MENDES PEREIRA, CANADA
- 09:45-10:00 **Round Table on imaging problems in the diagnosis and treatment of brain AVMs**

INDUSTRY SPONSORED SESSION Théâtre Symposia

- 10:00-10:30** Programme see details page 3

COFFEE BREAK Foyers Cartier & International

- 10:30-11:00 Meet the industry**

INDUSTRY SPONSORED SESSION Salon International 1&2

- 11:00-11:30** Programme see details page 3

LUNCH Exhibition Area

- 11:30** Lunch will be served on the Exhibition Area. We invite you to enjoy your meal during the free papers sessions.

FREE PAPERS Salon Cartier 1

- 12:15-13:30 Lunch & learn seminars: Imaging**
Moderators: Daniel ROY, CANADA
Charles C. MATOUK, USA
-
- 12:15-12:20 **0-19 Interval angioarchitecture evolution of bAVM following rupture**
Stephanie LENCK, FRANCE
- 12:21-12:26 **0-20 The value of consecutive diagnostic angiography in patients with hemorrhagic brain arteriovenous malformations: A cohort study** - *David BERVINI, SWITZERLAND*
- 12:28-12:33 **0-21 A proposed classification for assessing rupture risk in patient with intracranial arteriovenous malformations**
Felipe PADILLA, MEXICO
- 12:35-12:40 **0-22 Features Predictive of Brain Arteriovenous Malformation Hemorrhage: The Relationship between Number of Draining Veins, Venous Outflow Stenosis, and Venous Collaterals** - *Daniel SAHLEIN, USA*
- 12:42-12:47 **0-23 Time to Peak on Digital Subtraction Angiography as a Risk Factor for Hemorrhage in Patients with Untreated Brain Arteriovenous Malformation** - *Huang ZHENG, CHINA*
- 12:49-12:54 **0-24 Cerebellopontine Angle Cistern/ Cerebellar Peduncle Arteriovenous Malformations: A Case Series**
Horia MARIN, USA
- 12:56-13:01 **0-25 Posterior Fossa AVM. What can we understand from the venous drainage**
Maria A DE MIQUEL, SPAIN
- 13:03-13:08 **0-26 Redefining partial targeted embolization of ruptured cerebral AVMs: Identification of site of rupture with high-resolution MR vessel wall imaging** - *Branden CORD, USA*
- 13:10-13:15 **0-27 3T PET-MRI evaluation of unruptured brain AVM's: preliminary results**
Giacomo CESTER, ITALY
- 13:17-13:22 **0-28 Spinal dural AV fistula: CT/CTA, MRI/MRA and DSA evaluation** - *Wen-Hsien CHEN, TAIWAN*
- 13:24-13:29 **0-29 Role of 4D angiography in understanding the angio-architecture of AVMs for venous approach** - *Suzana SALEME, FRANCE*

Monday October 15, 2018

FREE PAPERS

Salon Cartier 2

- 12:15-13:30 Lunch & learn seminars: Pediatrics**
Moderators: Alain WEILL, CANADA
Alejandro BERENSTEIN, USA
- 12:15-12:20 **0-30** Current Treatment of Pediatric Arteriovenous Malformations: Multimodality management with embolization, microsurgery, and radiosurgery - Saadi GHATAN, USA
- 12:22-12:27 **0-31** Safety and outcome of combined endovascular and surgical management of low-grade cerebral Arteriovenous Malformations versus surgery alone in pediatric patients - Michael HURLEY, USA
- 12:29-12:34 **0-32** Embryologic Vascular Development: towards a better AVM understanding
Maria A DE MIQUEL, SPAIN
- 12:36-12:41 **0-33** Pediatric AVM treated with histoacryl glue embolization. Our experience
Elisa CICERI, ITALY
- 12:43-12:48 **0-34** Endovascular embolization for Vein of Galen malformation. Series of 46 patients. Methods, outcomes and complications
Dmitry KISLITSIN, RUSSIA
- 12:50-12:55 **0-35** Staged endovascular embolization in Vein of Galen aneurysmal malformation: heart failure and hemodynamics assessed via 4D flow MRI - Maria ARISTOVA, USA
- 12:57-13:02 **0-36** Case volume and outcomes of intracranial hemangiomas based on a national administrative database - Pokmeng SEE, USA
- 13:04-13:09 **0-37** Relationship between case volume and outcomes during elective management of cerebrovascular malformations based on a national administrative database
Pokmeng SEE, USA
- 13:11-13:16 **0-38** Pial arteriovenous fistulas in children: clinical symptoms and treatment
Flavio REQUEJO, ARGENTINA
- 13:18-13:23 **0-39** Embolization of intramedullary cervical AVMs - Luis LOPEZ-IBOR, SPAIN
- 13:25-13:30 **0-40** Pial fistula in infancy. Report of two cases and review of literature with special emphasis to the ruptured group
Ramez ABDALLA, USA

FREE PAPERS

Salon International 1&2

- 12:15-13:30 Lunch & learn seminars: Surgery/Radiation**
Moderators: David ROBERGE, CANADA
Chiraz CHAALALA, CANADA
- 12:15-12:20 **0-07** Driving after surgical repair of brain arteriovenous malformations; when should restrictions be recommended?
Joan Margaret O'DONNELL, AUSTRALIA
- 12:22-12:27 **0-09** Results and techniques of surgery for low-grade brain arteriovenous malformation resection by early career neurosurgeons: An observational study
Nirav PATEL, USA
- 12:29-12:34 **0-10** Occipital arteriovenous malformations: a single center experience of 110 patients
Stanislas SMAJDA, FRANCE
- 12:36-12:41 **0-11** Staged surgical resection of brain arteriovenous malformations
Eric SUSSMAN, USA
- 12:43-12:48 **0-12** Combined exclusion of AVM in one step (endovascular and microsurgery)
Francois PROUST, FRANCE
- 12:50-12:55 **0-13** Combined Endovascular and Microsurgical Treatment of Arteriovenous Malformations in the Hybrid Operation Room
Javier FANDINO, SWITZERLAND
- 12:57-13:02 **0-14** Multimodality Treatment in Brain Arteriovenous Malformations: Single Center Experience at Airlangga University dr Sutomo Hospital, Surabaya, Indonesia
Nur Setiawan SUROTO, INDONESIA
- 13:04-13:09 **0-16** Hypofractionated radiosurgery for large cerebral arteriovenous malformation: a case series and follow up results
George WONG, HONG KONG
- 13:11-13:16 **0-17** Management of residual bAVM after radiosurgery: arguments for a conservative management
Stephanie LENCK, FRANCE
- 13:18-13:23 **0-18** Stereotactic radiosurgery for brain arteriovenous malformations: predictors of treatment failure - John WONG, CANADA

Monday October 15, 2018

PLENARY SESSION Théâtre Symposia

- 13:30-15:00 Spinal Cord AVMs**
Moderators: Feng LING, CHINA
Jean RAYMOND, CANADA
-
- 13:30-13:40 How would you manage patients with spinal cord AVMs? Case presentation
Anne-Christine JANUEL, FRANCE
- 13:40-13:50 A systematic review of treatments of spinal cord AVMs - Stefanos FINITSIS, GREECE
Tomoyoshi SHIGEMATSU, USA
- 13:50-14:00 Spinal cord AVM embolization with particles remain indicated in many cases
Emmanuel HOUDART, FRANCE
- 14:00-14:10 Partial embolization of spinal cord AVMs reduces hemorrhagic risks
Alejandro BERENSTEIN, USA
- 14:10-14:20 Most spinal cord AVMs should be resected if at all possible - Feng LING, CHINA
- 14:20-14:30 Controversies regarding classifications of spinal cord AVMs - Georges RODESCH, FRANCE
- 14:30-14:40 **0-41 Spinal Cord Arterio-Venous Shunts in a Pediatric Population: Natural History, Endovascular Management and Follow-up**
Arturo CONSOLI, FRANCE
- 14:40-15:00 Round Table on Spinal cord AVMs

COFFEE BREAK Foyers Cartier & International

15:00-15:30 Meet the industry

GRAND CONFERENCE Théâtre Symposia

15:30-16:00 Spinal Cords AVMs: Lessons from a life time of surgical experience

Introduction - Michel BOJANOWSKI, CANADA
Robert SPETZLER, USA

PLENARY SESSION Théâtre Symposia

- 16:00-17:00 Dodi-Morbidity and Dodi-Mortality rounds**
Animators: Edoardo BOCCARDI, ITALY
Anne-Christine JANUEL, FRANCE
- 0-42 False negative angiography in gamma knife treated AVM about two cases - Isabelle PELISSOU-GUYOTAT, FRANCE**

Tuesday October 16, 2018

NEUROSURGICAL ANATOMY Salon Cartier1&2

- 07:30-08:30 Breakfast Anatomy Refresher**
Course: Posterior Fossa AVMs
Animators: Michael LAWTON, USA
Tim DARSAUT, CANADA

NEUROVASCULAR ANATOMY Salon International 1&2

- 07:30-08:30 Breakfast Anatomy Refresher**
Course: Posterior Fossa AVMs
Animator: Georges RODESCH, FRANCE

PLENARY SESSION Théâtre Symposia

- 08:45-09:30 Complications of AVM treatments**
Moderators: Michel PIOTIN, FRANCE
David MATHIEU, CANADA
-
- 08:45-08:55 Surgical complications: True incidence and prevention - Gary REDEKOP, CANADA
- 08:55-09:05 Understanding and preventing complications of Endovascular Treatments
Serge BRACARD, FRANCE
- 09:05-09:15 Complications of radiation therapy: Incidence and Management - Gelareh ZADEH, CANADA
- 09:15-09:25 Legal and Insurance aspects of living with an untreated brain AVM
Henning MAST, SWITZERLAND

INDUSTRY SPONSORED SESSION Théâtre Symposia

09:30-10:00 Programme see details page 3

COFFEE BREAK Foyers Cartier & International

10:00-10:30 Meet the industry

PLENARY SESSION Théâtre Symposia

- 10:30-12:00 Posterior Fossa AVMs**
Moderators: Daniel ROY, CANADA
Ivan RADOVANOVIC, CANADA
-
- 10:30-10:40 Posterior fossa AVMs: A Systematic review
Elsa MAGRO, FRANCE
- 10:40-10:50 Anatomical features and clinical presentation of posterior fossa AVMs - Timo KRINGS, CANADA
- 10:50-11:00 Lesions Characteristics and Treatment Outcomes of Brainstem AVMs - Gary STEINBERG, USA
- 11:00-11:10 Do's and Don't in Posterior fossa radiosurgery
Matthias RADATZ, UNITED KINGDOM
- 11:10-11:20 Endovascular treatment: Specific strategies and expected results in posterior fossa AVMs
Isil SAATCI, TURKEY
- 11:20-11:30 Posterior fossa AVMs: does the Spetzler-Martin classification apply? - Michael LAWTON, USA
- 11:30-12:00 Round Table: Discussion of cases from the faculty

Tuesday October 16, 2018

LUNCH Exhibition Area

12:00 Lunch will be served on the Exhibition Area. We invite you to enjoy your meal during the free papers sessions.

FREE PAPERS Salon Cartier 1&2

12:30-13:30 **Lunch & learn seminars: Endovascular**
Moderators: Michel PIOTIN, FRANCE
Lorena NICO, CANADA

12:30-12:35 **0-53** Embolization of brain arteriovenous malformation as a complementary method to surgery - Takuya NAKAZAWA, JAPAN

12:37-12:42 **0-54** Endovascular embolization as the first violin in multimodality treatment of brain arteriovenous malformations
Kirill ORLOV, RUSSIA

12:44-12:49 **0-55** Management of 4 Intranidal vascular ectasia with neurological symptoms and MRI oedema but no hemorrhage presentation in Brain arteriovenous malformations (BAVMs) by partial embolization - Florence TAHON, FRANCE

12:51-12:56 **0-56** Multi-modality Management of Complex Brain Arterio-venous Malformations, Early Experience
Waseem AZIZ, UNITED ARAB EMIRATES

12:58-13:03 **0-57** Non-staged, curative endovascular treatment for low-grade Spetzler-Martin brain arteriovenous malformations: a single-center prospective study
Charbel MOUNAYER, FRANCE

13:05-13:10 **0-58** Endovascular embolization of AVM with non-adhesive embolizes via a 2-lumen DMSO-compatible balloon catheter
Andrey PETROV, RUSSIA

13:12-13:17 **0-60** Odd looking AVM brain - How we treat
Umair RASHID, PAKISTAN

13:19-13:24 **0-61** Embolization of Cerebral Arteriovenous Malformations Using PHIL Liquid Embolic Agent in 28 Patients: A Multicenter Study
Saleh LAMIN, UNITED KINGDOM

FREE PAPERS Salon International 1&2

12:30-13:30 **Lunch & learn seminars: Basic Sciences**
Moderators: Tim DARSAUT, CANADA
Raphaël BLANC, FRANCE

12:30-12:36 **0-43** Cyclo-oxygenase 2 is expressed in the wall of brain AVM vessels and associates with inflammation - a putative mediator of vessel wall remodeling in - Marie FAUGHNAN, CANADA

12:38-12:44 **0-44** The Severity of Brain AVM is Correlated with the Number of Endothelial Cells Harboring Mutations of AVM Causative Genes
Sonal SHALIGRAM, USA

12:46-12:52 **0-46** Association between serum S100B level elevation and in-hospital mortality after brain arteriovenous malformation rupture
Nader-Antoine SOUROUR, FRANCE

12:54-13:00 **0-48** Results of Antiangiogenic in situ Administration on a Pig Angiogenesis Model Featuring AVM Histologic Characteristics
Chrysanthi PAPAGIANNAKI, FRANCE

13:02-13:08 **0-49** Investigation of a new version of the liquid embolic agent PHIL with extra-low viscosity in an endovascular embolization model - Markus MÖHLENBRUCH, GERMANY

13:10-13:16 **0-50** Pressure cooker technique may improve cyanoacrylate penetration in vascular malformations: a preliminary and experimental study in Swine - Lorena NICO, CANADA

13:18-13:24 **0-51** Extra-small dual-lumen micro-balloon catheters can improve endovascular embolizations: an experimental in vivo and in vitro study
Markus MÖHLENBRUCH, GERMANY

PLENARY SESSION Théâtre Symposia

13:30-15:00 **Clinical trials**
Moderators: Christian STAPF, CANADA
Serge BRACARD, FRANCE

13:30-13:45 Registries on untreated brain AVMs: limitations, biases and reasons to worry - Helen KIM, USA

13:45-14:00 Are there alternatives to RCTs to guide clinical practice? - Michael PARIDES, USA

14:00-14:10 Should clinicians replace RCTs by observational studies of their own practices?
Jean RAYMOND, CANADA

14:10-14:20 Pragmatic trials integrated to care are unfeasible? About TOBAS - Elsa MAGRO, FRANCE

14:20-14:30 The Venous route to brain AVMs: A RCT
Tim DARSAUT, CANADA

14:30-15:00 Debate: Clinical research serves to advance knowledge or to practise outcome-based medical care of CNS AVMs?
Michael LAWTON, USA - Joseph BRODERICK, USA - Michael PARIDES, USA - Helen KIM, USA
Jean RAYMOND, CANADA - René CHAPOT, GERMANY - Luc PICARD, FRANCE - Elsa MAGRO, FRANCE - Tim DARSAUT, CANADA
Charbel MOUNAYER, FRANCE

Tuesday October 16, 2018

GRAND CONFERENCE Théâtre Symposia

15:00-15:30 How to set up a network of centers to advance neurovascular therapies

Introduction - *Christian STAFF, CANADA*
Joseph BRODERICK, USA

COFFEE BREAK Foyers Cartier & International

15:30-16:00 Meet the industry

GRAND CONFERENCE Théâtre Symposia

16:00-16:30 The Future: Radiation therapy of brain AVMs: recent advances and future perspectives

Introduction - *David ROBERGE, CANADA*
Helen SHIH, USA

PLENARY SESSION Théâtre Symposia

16:30-17:30 The Future

Moderators: *David ROBERGE, CANADA*
Alain WEILL, CANADA

- 16:30-16:45 Various endovascular approaches will soon cure most AVMs - *René CHAPOT, GERMANY*
- 16:45-17:00 Neurosurgery will remain standard treatment in the near future - *Michael LAWTON, USA*
- 17:00-17:30 Round Table: The future
Gary STEINBERG, USA - Hongqi ZHANG, CHINA
David ROBERGE, CANADA - René CHAPOT, GERMANY - Charbel MOUNAYER, FRANCE - Michael LAWTON, USA - Helen SHIH, USA - Chiraz CHAALALA, CANADA - Alejandro BERENSTEIN, USA

17:30-17:40 The 2020-2022 meetings and closing remarks

Jean RAYMOND, CANADA

1. BASIC OR COMPUTER SCIENCES

P-01 miRNAs Profile In Patients With Brain Arteriovenous Malformation - *Eric Homero Albuquerque PASCHOAL*

P-02 Relationship between NOTCH4 gene polymorphism and brain arteriovenous malformation development: a systematic review - *Eric Homero A PASCHOAL*

2. NATURAL HISTORY

P-03 Different shunts in cerebral arteriovenous malformation, based on colorimetry by digital abduction - *Felipe PADILLA*

P-04 De Novo Formation of Spinal Pial Arteriovenous Fistula Ten Years Post-Resection of Different AVFs - *Michael HURLEY*

P-05 Visual aura due to temporo-occipital arteriovenous malformation: clinical characterization and multimodal imaging investigation in a case series - *Roberta LA PIANA*

P-06 De novo Cerebral Arteriovenous Malformation in a middle-aged adult: Case Report and Literature Review - *Emilio LOZUPONE*

P-07 Angio-architecture of brainstem arteriovenous malformations: a single-center series of 29 patients - *Chun On Anderson TSANG*

3. EPIDEMIOLOGY

P-08 Cerebral proliferative angiopathy: 14 cases in a single-center and a systematic review - *Eric Homero A PASCHOAL*

P-09 Molecular Biomarkers in a Ruptured Brain Arteriovenous Malformation: a Systematic Review - *Eric Homero A PASCHOAL*

4. SURGERY

P-10 Lenticulostriate perforator clipping as a part of AVM treatment – two case reports - *Vladimir PRIBAN*

P-11 The Importance Of Multimodal Intra-Operative Neurophysiological Mapping For Surgical Brain Arteriovenous Malformation - *Eric Homero A PASCHOAL*

P-12 Persistent filling of early draining veins after complete angioma resection visualized by ICG videoangiography - A case-based discussion - *Martin ORTLER*

5. RADIOSURGERY

P-13 Late complications of radiosurgery for cerebral arteriovenous malformations: report of 5 cases of growing chronic hemorrhagic cystic lesions - *René ANXIONNAT*

P-14 Predictors of post-treatment epilepsy in 126 patients treated with stereotactic radiosurgery for brain arteriovenous malformation - *Isaac FREEDMAN*

P-15 Predictors of latent hemorrhage after stereotactic radiosurgery in 126 patients with brain arteriovenous malformations - *Isaac FREEDMAN*

6. ENDOVASCULAR THERAPY

P-16 New endovascular classification of dural avf - *Luis LOPEZ-IBOR*

P-17 Adult Vein of Galen malformation presenting with rapidly progressive Parkinsonism due to bilateral thalamic edema successfully treated by transarterial Onyx embolization - *Emad NOUROLLAHZADEH*

P-18 Right ophthalmic vein dural arterio-venous fistula: coil embolization by percutaneous puncture of ophthalmic vein - *Wen-Hsien CHEN*

P-19 Treatment of dural arteriovenous fistula via combined trans-arterial embolization and stenting of transverse sinus - *Pouya ENTEZAMI*

7. IMAGING

P-20 Abnormal Brain Organization and Structure in Patients with Arteriovenous Malformations - *Paul-Noel ROUSSEAU*

P-21 Pediatric presentation of intracranial hemorrhage due to thrombosis of a developmental venous anomaly - *Pouya ENTEZAMI*

8. CLINICAL TRIALS

P-22 Transvenous approach for the treatment of cerebral arteriovenous malformations (TATAM): a randomized controlled trial and registry - *Robert FAHED*

9. MISCELLANEOUS

P-23 Arteriovenous shunting lesions involving the spinal cord: review and proposition of an anatomic classification - *Stephanie LENCK*

P-24 The treatment of brain arteriovenous malformation study (TOBAS): a preliminary inter- and intra-rater agreement study on patient management - *Robert FAHED*

P-25 AVM draining into a DVA: case report and literature review
Jacques GUYOTAT

OFFICIAL LANGUAGE: ENGLISH**CONGRESS VENUE**

Centre Mont-Royal - 2200 Mansfield Street
Montreal, Quebec, H3A 3R8

Welcome Desk Level 1, Hall Symposia

Plenary Sessions Level 1, Théâtre Symposia

Speaker Service Centre

Ground Floor, Salle Mansfield #4

Coffee Break and lunch buffet

Level 3, Exhibition Area, Foyer International & Foyer Cartier

Exhibition Area Level 3, Foyer International & Foyer Cartier

Poster Area Level 3, Exhibition Area

EDUCATIONAL ACCREDITATIONS

The 4th World Congress has been accredited by the EACCME for 19 European CME credits.

Your certificate will be available on our website www.avm2018.org from October 22.

CERTIFICATE OF ATTENDANCE

Your certificate of attendance for the 4th World Congress will be available on our website www.avm2018.org from October 22.

SOCIAL PROGRAMME

Welcome cocktail, October 14, 18:45, Level 3, Exhibition Area.

USEFUL INFORMATION

Airport Information: Montreal-Trudeau Airport is located in Dorval, about 20 minutes away from downtown Montréal.

The 4th World Congress on brain AVMs will now be held in Centre Mont-Royal, 2200 Mansfield Street, Montreal, Quebec, on October 14-16.

Located downtown, the Centre Mont-Royal will offer you the opportunity to enjoy the Montreal cool lifestyle. Near cafés, parks, galleries, museums and shops you will appreciate the neighbourhood.

Your stay will be as captivating as Montreal city is!

REGISTRATION AND INFORMATION

19, allées Jean Jaurès - BP 61508
31015 Toulouse Cedex - France

Tel + 33 (0) 5 34 45 26 45

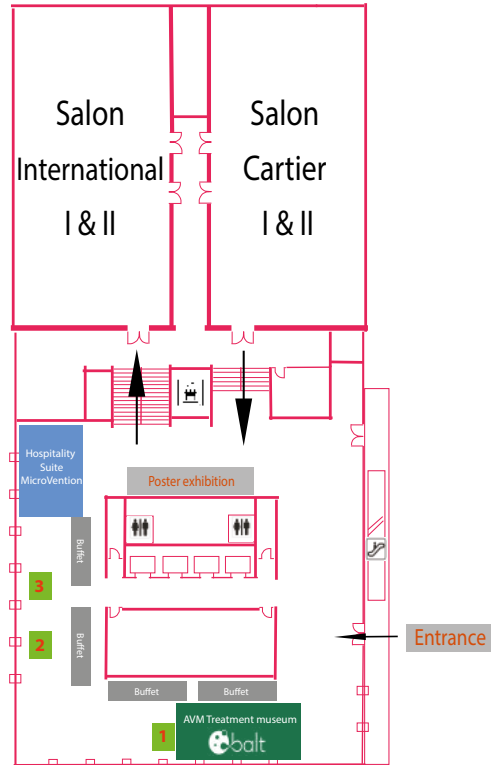
regist-avm@europa-organisation.com

ACCOMMODATION

All information are available on the official webpage:
www.avm2018.org/accommodation

Centre Mont Royal**LEVEL 3****Exhibitor list**

- 01 Balt
- 02 Medtronic
- 03 MicroVenton



You probably remember a time when treating a cerebral AVM via an endovascular approach was even more a challenge than it is today - That is until we got the chance to be involved... in fact it was some 40 years ago.

The 4th world AVM congress is the perfect opportunity to take few minutes to look back at ALL we achieved together over the last 40 years.

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Gold level



Silver level



Bronze level



Others partners





Welcome the 4th dimension to the angio suite

Treating malformations such as AVMs or fistula is very likely one of the biggest challenges in the field of neuro interventions. Understanding the disease and understanding the angio architecture is crucial for creating the best possible treatment plan and a successful embolization.

With the latest innovations such as *syngo* Dyna4D, Siemens equipment enhances treatment planning and supports the intervention further with the best image quality at low radiation.

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* This is the experience of individual users. Results may vary.

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