FÉDÉRATION FRANÇAISE CPDPN
Centres Pluridisciplinaires de Diagnostic Prénatal

Les Hôpitaux Universitaires de STRASBOURG

QUAND UNE INTERRUPTION SÉLECTIVE DE GROSSESSE EST DISCUTÉE...

Quand? Comment?

14° Journée annuelle du CPDPN de Strasbourg 13/12/2024 - CMCO
« Le point sur les grossesses monochoriales »
Dr Charlotte Arnalsteen

PLAN

Contexte

Quand?

- Indication
- Terme

Comment?

Et autour

Take home messages

LE CONTEXTE

Anastomoses vasculaires = péril de l'autre jumeau

Décès de l'un

→ redistribution vasculaire

→ décès ou bas débit avec séquelles de l'autre

Séparation = protection

Reviews

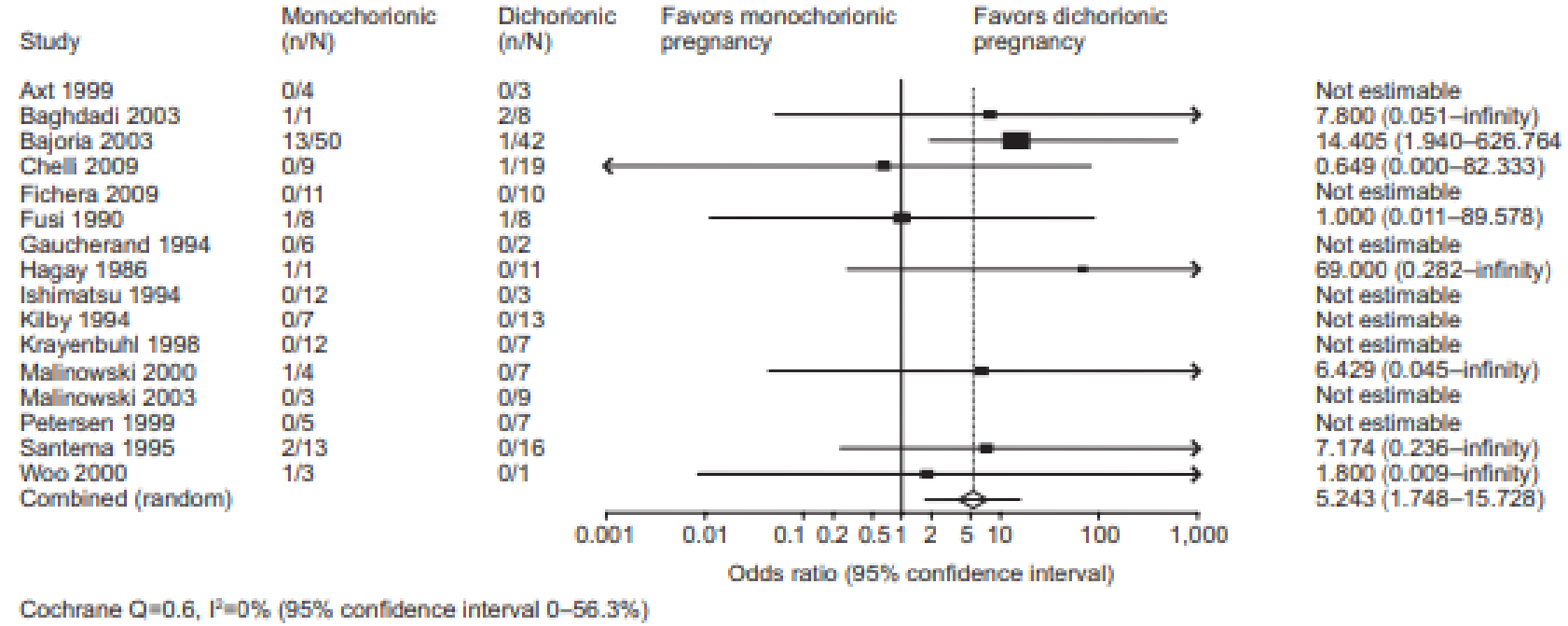
Co-Twin Prognosis After Single Fetal Death

A Systematic Review and Meta-Analysis

Sarah C. Hillman, MRCOG, Rachel K. Morris, MRCOG, Mark D. Kilby, FRCOG

Obstetrics & Gynecology 118(4):p 928-940, October 2011. | **DOI:** 10.1097/AOG.0b013e31822f129d

ACOG
The American College of Obstetricians and Gynecologists



Cochrane Q=0.6, I^2=0% (95% confidence interval 0–56.3%)

A

Décès du co-jumeau

OR5 p<0,05
15 % vs 3%

Reviews

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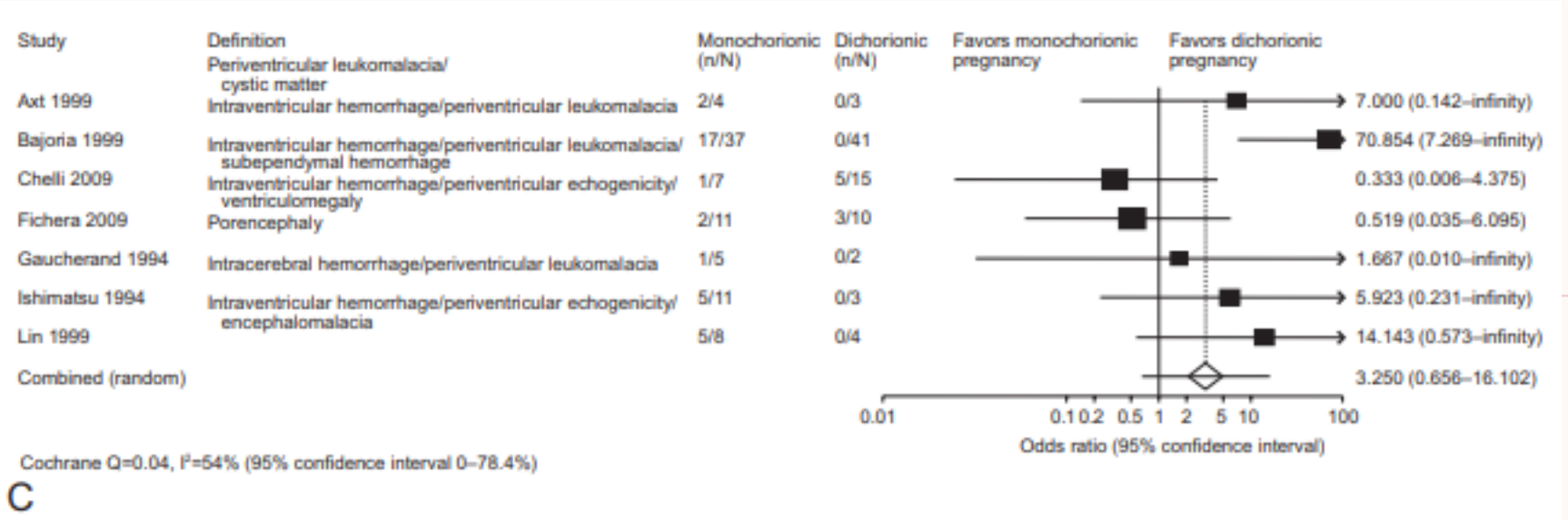

C

Anomalies cérébrales du survivant

OR 3,25 NS
34% vs 16%

Reviews

Co-Twin Prognosis After Single Fetal Death

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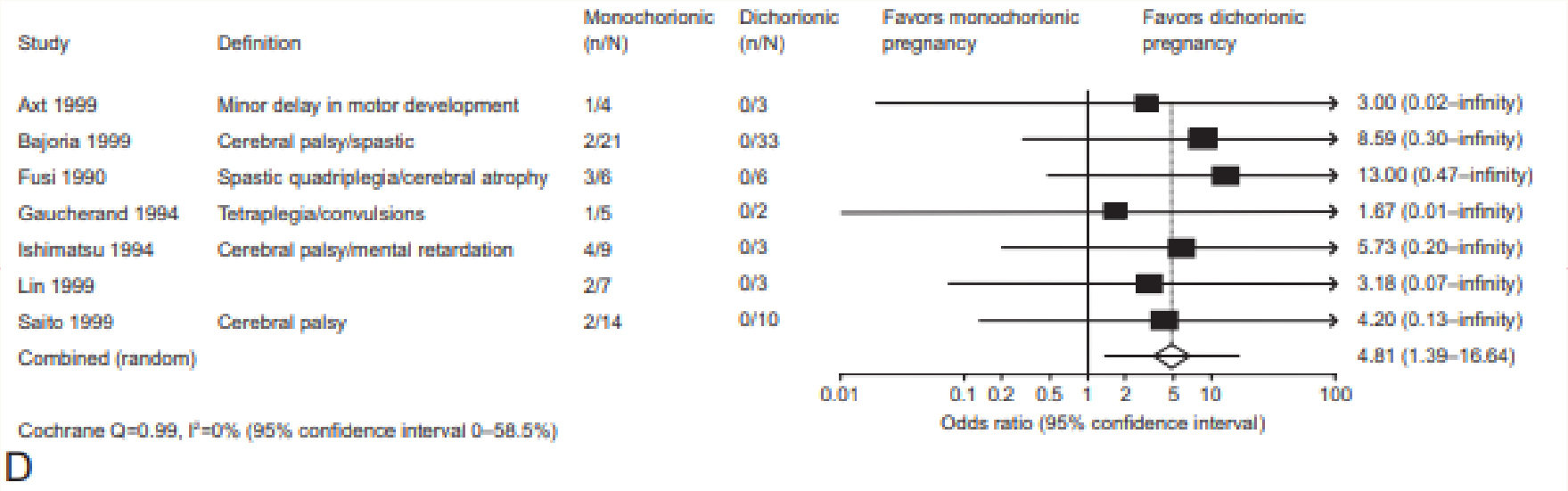


Troubles du neuro-développement

OR 4,81 p<0,05
26% vs 2%

QUAND?

indication

INDICATIONS

- Anomalies morphologiques
- TRAP
- Discordance LCC/CN
- RCIU sélectif
- STT
- Réduction embryonnaire

ANOMALIES MORPHOLOGIQUES

- Indications d'IMG pour un seul fœtus

Arch Gynecol Obstet. 2021 Mar;303(3):685-693. doi: 10.1007/s00404-020-05782-1. Epub 2020 Sep 9.

Perinatal mortality and morbidity, timing and route of delivery in monoamniotic twin pregnancies: a retrospective cohort study

Yvon Chitrit [1], Diane Korb [2 3], Cecile Morin [2 4], Thomas Schmitz [2 3], Jean-François Oury [2 5], Olivier Sibony [2 5]

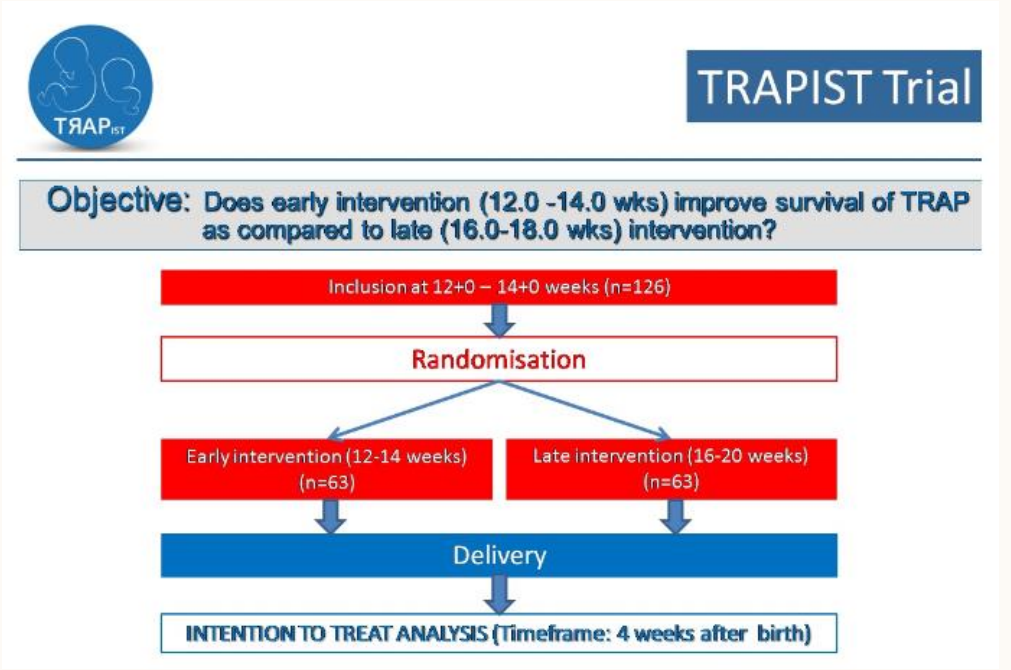
Late embryonic cleavage and imbalances across the large anastomoses are probably the cause of this higher prevalence of congenital abnormalities.

TRAP

- Seulement quand retentissement par fœtoscopie

  OU

- Précocement préventivement par laser interstitiel



DISCORDANCE LCC/CN

- STT très précoce, RCIU sélectif très précoce

  → perte de la grossesse

RCIU SÉLECTIF

- Sévère à risque de perte fœtale

  → intervenir avant la MIU pour protéger le co jumeau

STT

- Quand la thérapie est impossible ou stade considéré comme dépassé

RÉDUCTION EMBRYONNAIRE

Established in 1871
Swiss Medical Weekly
Formerly: Schweizerische Medizinische Wochenschrift
The European Journal of Medical Sciences

Original article | Published 30 November 2011, doi:10.4414/smw.2011.13308
Cite this as: Swiss Med Wkly. 2011;141:w13308

Higher multiple births in Switzerland: neonatal outcome and evolution over the last 20 years

Romaine Arlettaz Mieth[a], Sonja Ersfeld[a], Nelson Douchet[b], Sven Wellmann[a], Hans-Ulrich Bucher[a]

	Triples	Quadruples	Quintuples
Age gestationnel	32+1	29+2	28+4

AJOG American Journal of Obstetrics & Gynecology

Maternal morbidity and obstetric complications in triplet pregnancies and quadruplet and higher-order multiple pregnancies

Shi Wu Wen, MB, PhD,[a,*] Kitaw Demissie, MD, PhD,[b] Qiuying Yang, MD, PhD,[c] Mark C. Walker, MD[a]

OMNI Research Group, Department of Obstetrics and Gynecology and Ottawa Health Research Institute, University of Ottawa, Ottawa, Ontario, Canada[a]; Division of Epidemiology, School of Public Health, UMDNJ, Piscataway, NJ[b]; Mclaughlin Center for Population Health Risk Assessment, Institute of Population Health, University of Ottawa, Ottawa, Ontario, Canada[c]

Received for publication September 2, 2003; revised November 5, 2003; accepted December 4, 2003

There were significant increases in most adverse maternal and obstetric complications in women with triplet and quadruplet and higher-order multiple pregnancies than in women with twin pregnancies, even after adjustment for important confounding factors (Table II).

Maternal morbidity and obstetric complications in triplet pregnancies and quadruplet and higher-order multiple pregnancies

Table II Comparison of maternal health outcomes among women with twin, triplet, and quadruplet and higher-order pregnancy

				Triplet vs twin		Quadruplet vs twin	
Outcome	Twin (n)	Triplet (n)	Quadruplet or higher (n)	Crude odds ratio (95% CI)	Adjusted odds ratio (95% CI)	Crude odds ration (95% CI)	Adjusted odds ratio (95% CI)
Chronic hypertension	1429 (0.95%)	49 (0.92%)	5 (1.20%)	0.96 (0.71, 1.29)	0.90 (0.68, 1.20)	1.27 (0.46, 3.16)	1.29 (0.53, 3.13)
Gestation hypertension	11692 (7.68%)	567 (10.32%)	48 (11.57%)	1.38 (1.26, 1.52)	1.19 (1.09, 1.31)	1.57 (1.15, 2.15)	1.35 (1.00, 1.83)
Eclampsia	1522 (1.00%)	106 (1.93%)	7 (1.69%)	1.94 (1.58, 2.38)	1.70 (1.38, 2.09)	1.69 (0.24, 3.69)	1.46 (0.69, 3.09)
Anemia	4685 (3.13%)	173 (3.24%)	9 (2.17%)	[illegible]	[illegible]	[illegible]	[illegible]
Diabetes mellitus	5085 (3.34%)	328 (5.97%)	28 (6.75%)	1.84 (1.63, 2.07)	1.56 (1.39, 1.76)	2.10 (1.40, 3.12)	1.81 (1.23, 2.67)
Cardiac disorder	930 (0.62%)	49 (0.92%)	4 (0.96%)	[illegible]	[illegible]	[illegible]	[illegible]
Placental abruption	1842 (1.21%)	86 (1.57%)	8 (1.94%)	1.30 (1.03, 1.63)	1.33 (1.06, 1.66)	1.61 (0.74, 3.34)	1.68 (0.83, 3.38)
Placenta previa	700 (0.46%)	29 (0.53%)	4 (0.99%)	[illegible]	[illegible]	[illegible]	[illegible]
Premature rupture of membrane	9985 (6.66%)	598 (11.17%)	44 (10.65%)	1.76 (1.61, 1.93)	1.68 (1.54, 1.84)	1.67 (1.21, 2.31)	1.63 (1.19, 2.23)
Cord prolapse	856 (0.57%)	31 (0.58%)	3 (0.73%)	[illegible]	[illegible]	[illegible]	[illegible]
Cesarean delivery	77966 (51.21%)	4765 (86.78%)	359 (84.87%)	3.25 (5.77, 6.77)	5.86 (5.42, 6.35)	5.34 (4.06, 7.04)	5.04 (3.86, 6.58)
Labor induction	19176 (12.75%)	157 (2.92%)	13 (3.13%)	[illegible]	[illegible]	[illegible]	[illegible]
Vacuum/forceps	9798 (6.44%)	44 (0.80%)	4 (9.45%)	0.12 (0.08, 0.16)	0.10 (0.07, 0.14)	0.14 (0.04, 0.38)	0.11 (0.05, 0.69)

The risks of maternal morbidity and obstetric complications tend to be higher for women with triplet pregnancies and quadruplet and higher-order multiple pregnancies than for women with twin pregnancies.

BJOG An International Journal of Obstetrics and Gynaecology
Royal College of Obstetricians & Gynaecologists

Systematic Review

Dichorionic triplet pregnancies: risk of miscarriage and severe preterm delivery with fetal reduction versus expectant management. Outcomes of a cohort study and systematic review

M Morlando, L Ferrara, F D'Antonio, A Lawin-O'Brien, S Sankaran, D Pasupathy, A Khalil, A Papageorghiou, P Kyle, C Lees, B Thilaganathan, A Bhide

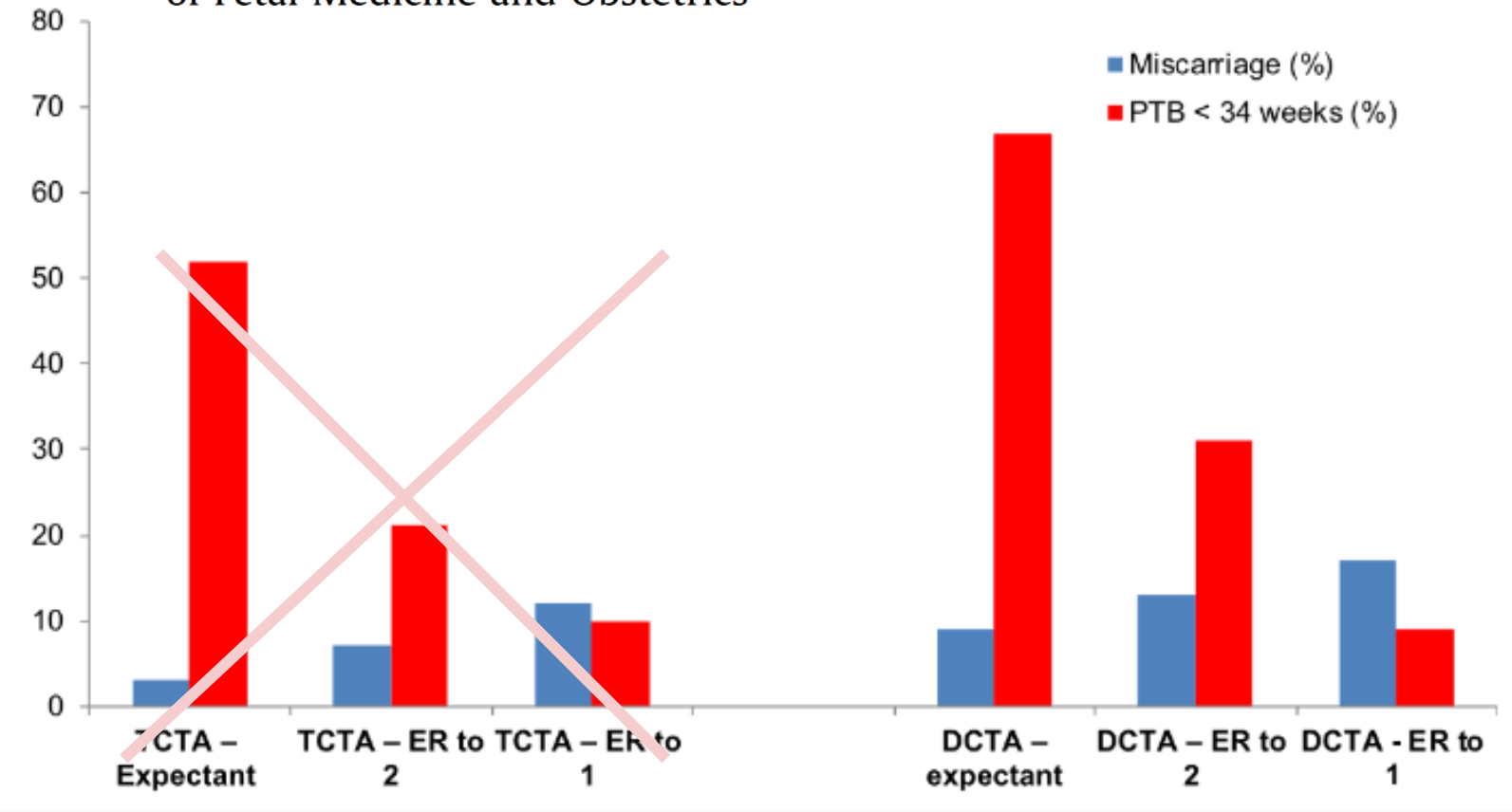
Conclusions

In DCTA triplets, expectant management is a reasonable choice when the top priority is a liveborn infant. Where the priority is to minimise severe preterm delivery, the most advisable option is fetal reduction. Further studies are needed to clarify which particular technique is advisable to optimise the outcome.

Best Practice & Research Clinical Obstetrics & Gynaecology
Volume 70, January 2021, Pages 112-122

Reduction of multiple pregnancy: Counselling and techniques

Mercede Sebghati, MBBS, MRCP, Specialist Registrar, Obstetrics & Gynaecology [a],
Asma Khalil, MBBCh, MD, MRCOG,MSc (Epid), DFFP, Professor of Fetal Medicine and Obstetrics [a, b, c, *]



QUAND?

Terme

TERME

- Dès 11 SA pour le laser interstitiel
- Avant 17 SA avec instrument de gros calibre: risque RPM important du fait du non accolement des membranes
- Si trop tard: apparition des complications spécifiques des monochoriales (STT)
- Si trop tard: techniquement plus difficile, temps de procédure plus long, et donc plus à risque de complications

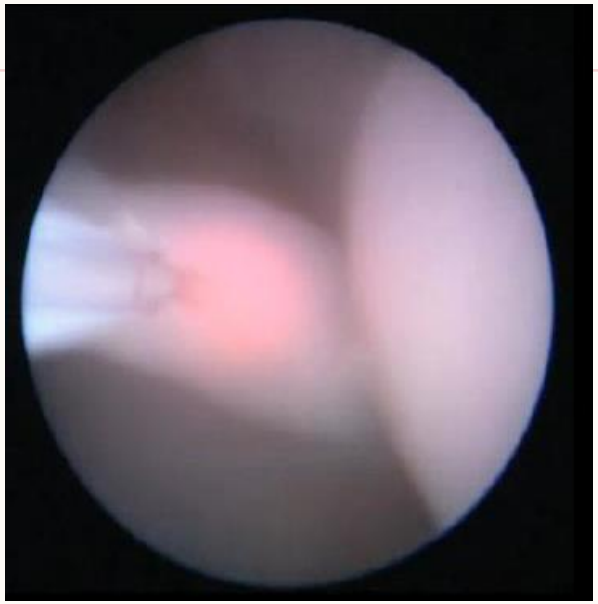
COMMENT?

MODALITÉS

- Fœtoscopie laser
- Laser interstitiel
- Pince bipolaire
- Radiofréquence
- IMG per césarienne
- Cas exceptionnel : Mono amniotique

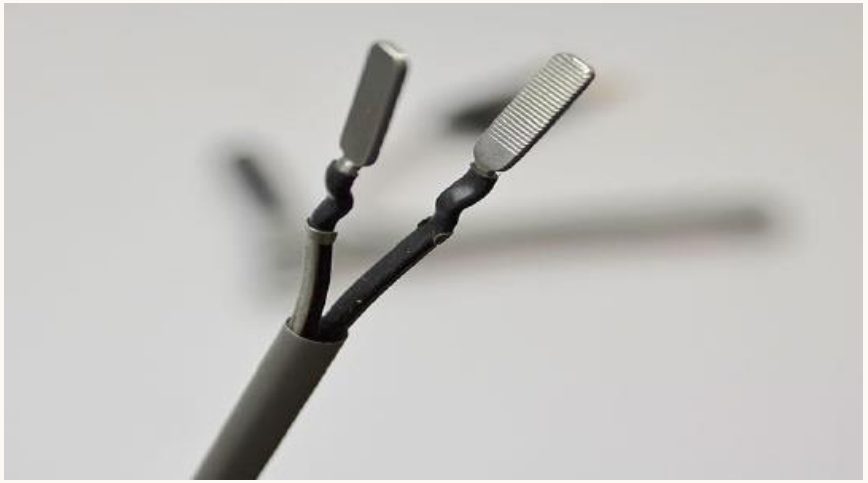
FOETOSCOPIE LASER

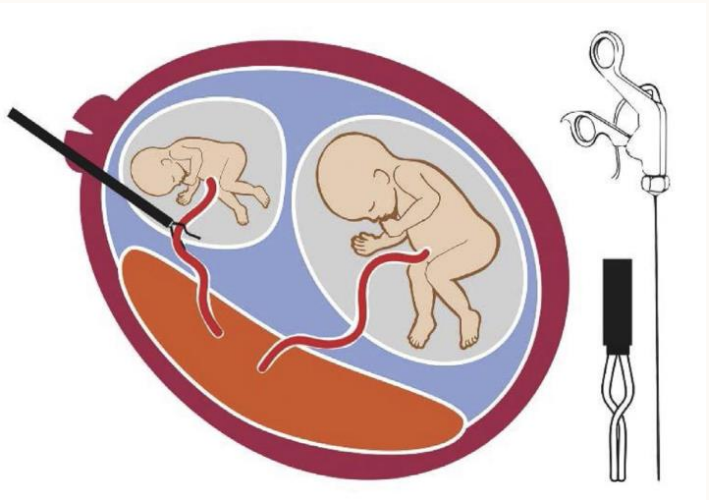
- Trocart de 10 Fr (3,3mm)
- Dévitalisation du cordon ombilical
- Sous contrôle foetoscopique direct
- Laser CO
- Amnioinfusion



PINCE BIPOLAIRE

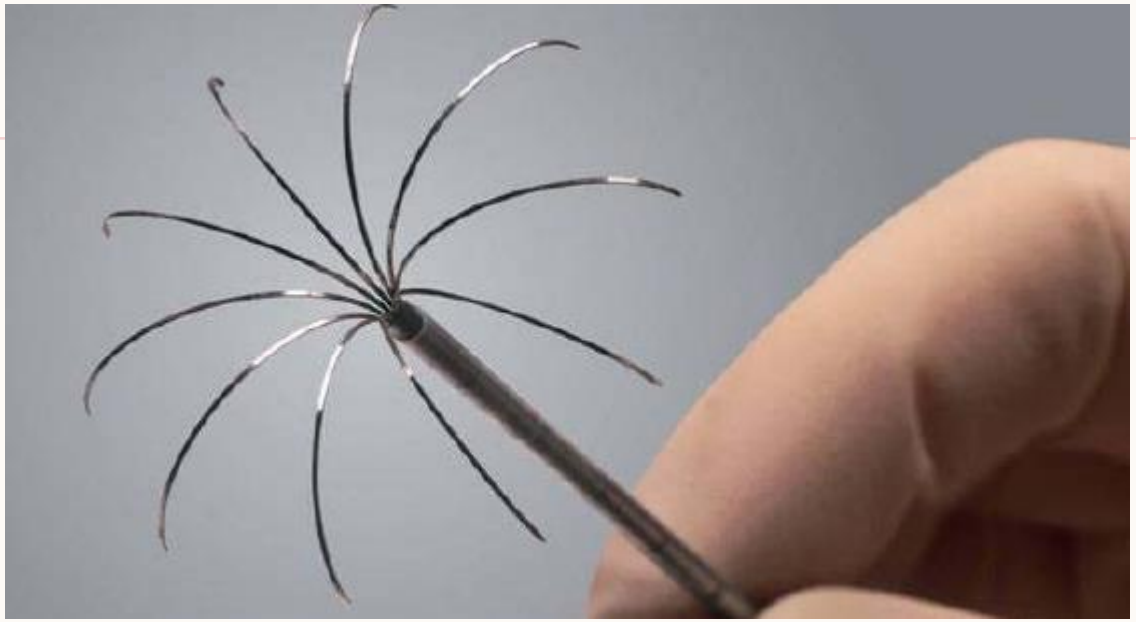
- Trocart de 10 Fr (3,3mm)
- Occlusion cordonale puis électrocoagulation
- Sous contrôle échographique
- Tardif

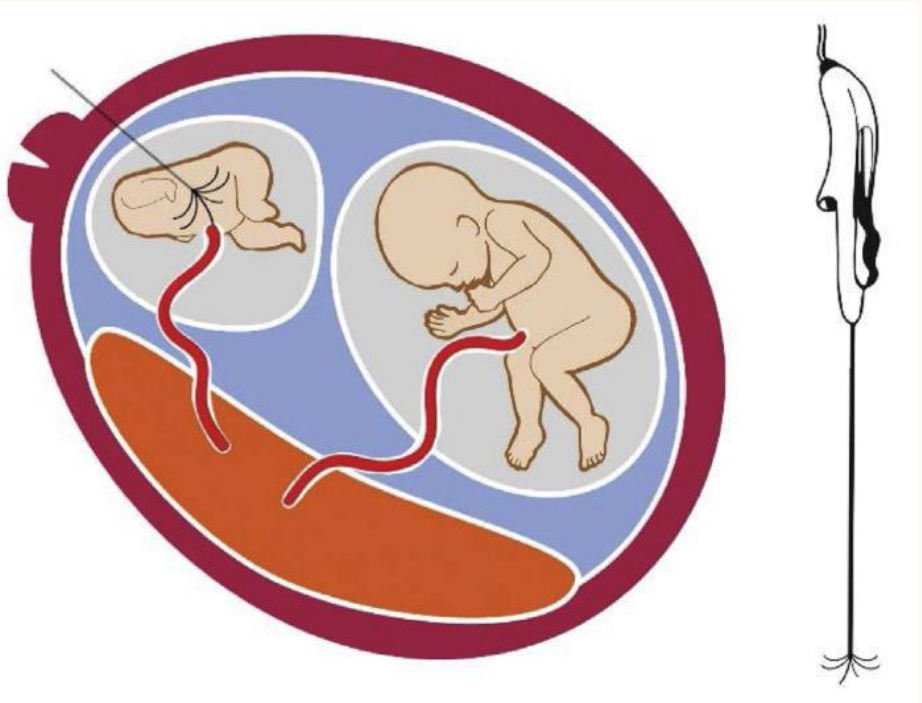




RADIOFRÉQUENCE

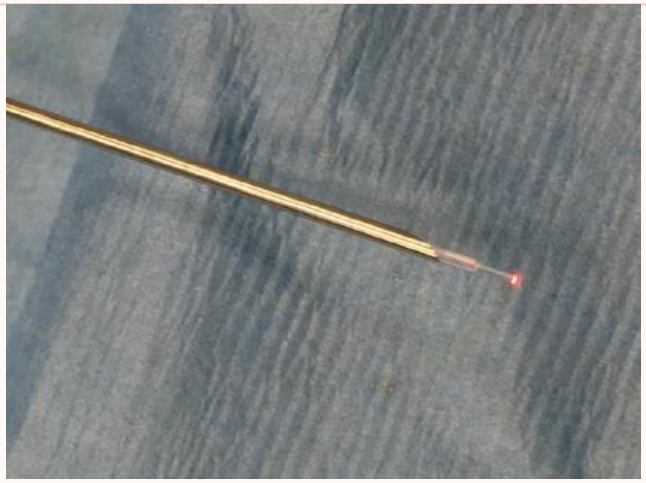
- Aiguille de 17G (1,5mm)
- Intra-abdominal
- Sous contrôle échographique

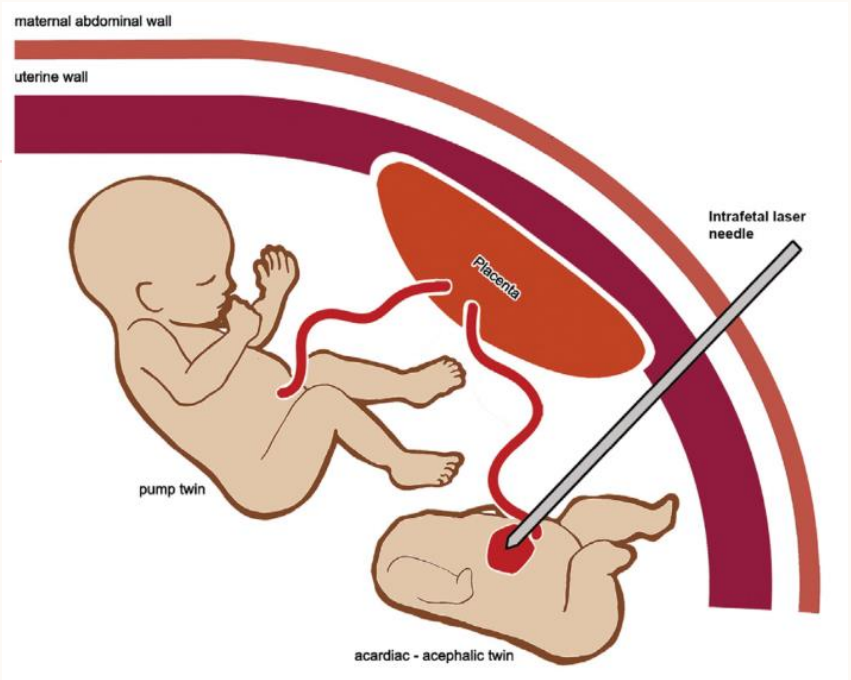




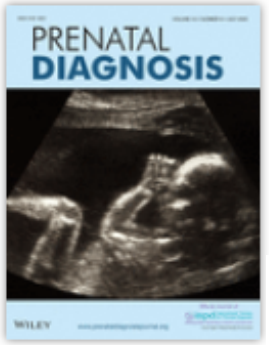
LASER INTERSTITIEL

- Aiguille de 18 G (1,2mm)
- Intra-abdominal
- Sous contrôle échographique
- Dès 11 SA, difficile après 18 SA
- TRAP






E10
3e Trimestre/OB
HI M 7.90 - 4.50
Gn 5
C6/M16
FF3/E2
SRI II 2/CRI 4



Prenatal Diagnosis: Volume 43, Issue 8

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DOI: 10.1002/pd.6385

Perinatal outcome after selective fetal reduction in monochorionic twin pregnancies: A comparison of techniques over a 20-year period

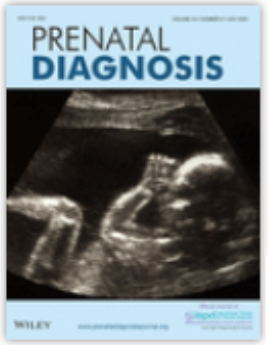
M. J. C. van Hoek[1] | J. M. M. van Klink[2] | E. J. T. Verweij[1] | J. M. Middeldorp[1] | M. C. Haak[1] | E. Lopriore[2] | F. Slaghekke[1]

Risque de perte fœtale au moment de la procédure

Risque de perte fœtale au moment de la procédure

TABLE 1 Perinatal outcome after selective reduction per technique for 259 monochorionic twin pregnancies.

Perinatal outcome	ILC (*n* = 29)	RFA (*n* = 64)	FLC (*n* = 85)	BCC (*n* = 81)	*p*-value	Total (*n* = 259)
GA at therapy (completed weeks)	16.1 (5.1)	16.7 (2.6)	16.9 (2.9)	20.7 (2.9)	<0.001	17.9 (3.7)
PPROM[a]	1 (3.7%)	9 (14.5%)	16 (19.0%)	19 (24.1%)	0.098	45 (17.9%)
GA at birth[d] (completed weeks)	35.3 (5.1)	35.6 (5.2)	35.2 (5.6)	34.4 (4.5)	0.592	34.9 (5.0)
Birthweight[d,b] (grams)	2585 (1049)	2668 (973)	2621 (989)	2331 (856)	0.205	2526 (948)
Mortality	14 (48.3%)	20 (31.3%)	26 (30.6%)	14 (17.3%)	0.012	74 (28.6%)
Fetal demise	14 (48.3%)	15 (23.4%)	12 (14.1%)	9 (11.1%)	<0.001	50 (19.3%)
TOP	0 (0.0%)	2 (3.1%)	8 (9.4%)	0 (0.0%)	0.009	10 (3.9%)
Non-viable (<24 weeks)	0 (0.0%)	2 (3.1%)	5 (5.9%)	2 (2.5%)	0.427	9 (3.5%)
Neonatal demise	0 (0.0%)	1 (1.6%)	1 (1.2%)	3 (3.7%)	0.529	5 (1.9%)
Survival per indication						
TRAP	11/24 (45.8%)	17/23 (73.9%)	19/27 (70.4%)	2/2 (100.0%)	0.109	49/76 (64.5%)
TTTS	1/1 (100.0%)	9/15 (60.0%)	20/27 (74.1%)	25/33 (75.8%)	0.624	55/76 (72.4%)
sFGR	2/2 (100.0%)	12/14 (85.7%)	6/6 (100.0%)	16/17 (94.1%)	0.659	36/39 (92.3%)
Congenital anomaly	0/1 (0.0%)	3/9 (33.3%)	11/19 (57.9%)	19/23 (82.6%)	0.027	33/52 (63.5%)
TAPS	-	1/1 (100.0%)	1/1 (100.0%)	4/5 (80.0%)	0.792	6/7 (85.7%)
Other	1/1 (100.0%)	2/2 (100.0%)	2/5 (40.0%)	1/1 (100.0%)	0.308	6/9 (66.7%)
Neonatal morbidity[e,c]	2 (15.4%)	6 (14.0%)	5 (8.6%)	12 (18.8%)	0.456	25 (14.0%)



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What does this study add?

- Selective fetal reductions in monochorionic twins have the lowest mortality rate of the co-twin after bipolar cord coagulation and the highest after interstitial laser coagulation.
- High preterm pre-labor rupture of membranes rates before 32 weeks gestational age was seen irrespective of the technique.
- The selection of the most ideal technique should be made per pregnancy, considering gestational age, indication and feasibility.

IMG PER CÉSARIENNE

- Après la naissance et clampage du cordon de J1
- KCL intracordonal
- Avant extraction et naissance de J2

Il s'agit d'une grossesse monochoriale, biamniotique, de 29 SA, dont l'évolution a été marquée par le développement d'un STT traité par fœtoscopie laser le 20 mai.

Une anomalie majeure du parenchyme cérébral à été mise en évidence à distance du geste justifiant la réalisation d'une IRM qui conforte malheureusement l'atrophie cortico sous corticale majeure de JB.

Devant ce tableau de pathologie cérébrale chez JB, dont le pronostic sévère a été confirmé par le Professeur , neuropédiatre, le couple opte pour l'interruption du fœtus atteint.

De ce fait, une interruption sélective de grossesse a été proposée en première intention. La patiente ne la souhaite pas, préférant que l'interruption se fasse juste avant l'accouchement, avec cependant un risque d'impossibilité à réaliser la procédure en cas d'accouchement imminent.

SITUATION EXCEPTIONNELLE

Mono amniotique: Section du cordon pour éviter enchevêtrement

ET AUTOUR?

- Suivi obstétrical et échographique rapproché
- Accompagnement psychologique
    - différents protagonistes
    - infertilité vs ISG
    - 4 temps

TAKE HOME MESSAGES

Protéger le fœtus restant

Laser interstitiel: précoce, TRAP

Bipolaire: le plus sûr