WEBVTT

1
00:00:05.270 --> 00:00:07.470
- Hello, I'm Dr. Sanithia Williams

2
00:00:07.470 --> 00:00:08.800
Fellow in Family Planning at the

3
00:00:08.800 --> 00:00:11.650
University of California San Francisco.

4
00:00:11.650 --> 00:00:13.160
In this module I'm going to discuss

5
00:00:13.160 --> 00:00:15.470
first trimester aspiration abortion.

6
00:00:15.470 --> 00:00:16.700
By the end of this module,

7
00:00:16.700 --> 00:00:19.480
you'll have a working knowledge
of the incidence of abortion

8
00:00:19.480 --> 00:00:22.248
in the United States, the
relative safety of first

9
00:00:22.248 --> 00:00:24.320
trimester surgical abortion,

10
00:00:24.320 --> 00:00:27.310
and the basic steps of
performing the simple procedure.

11
00:00:27.310 --> 00:00:30.570
First, some background on
abortion in the United States.

12
00:00:30.570 --> 00:00:33.160
Abortion is one of the most
common surgical procedures

13
00:00:33.160 --> 00:00:35.850
performed in the United
States with slightly less

14
00:00:35.850 --> 00:00:38.090
than one million abortions
performed per year

15
00:00:38.090 --> 00:00:39.570
in the most recent data.

16
00:00:39.570 --> 00:00:41.950
Abortion is a common part
of the reproductive lives

17
00:00:41.950 --> 00:00:45.070
of cisgender women with one
in four experiencing abortion

18
00:00:45.070 --> 00:00:46.940
by the age of 45.

19
00:00:46.940 --> 00:00:50.520
However, not only cisgender
women experience abortion.

20
00:00:50.520 --> 00:00:53.650
Trans men, non-binary,
and other gender binary

21
00:00:53.650 --> 00:00:56.880
nonconforming people
also experience abortion.

22
00:00:56.880 --> 00:00:58.660

Little data is available on how common

23
00:00:58.660 --> 00:01:00.470
this procedure is in this group,

24
00:01:00.470 --> 00:01:02.110
but it is important to remember anyone

25
00:01:02.110 --> 00:01:04.730
with a uterus can experience abortion.

26
00:01:04.730 --> 00:01:06.800
The vast majority of abortions take place

27
00:01:06.800 --> 00:01:09.225
before 12 weeks making this simple skill

28
00:01:09.225 --> 00:01:11.220
a necessary tool for the practicing

29
00:01:11.220 --> 00:01:12.820
reproductive health provider.

30
00:01:12.820 --> 00:01:15.380
Aspiration abortion done
by a trained provider

31
00:01:15.380 --> 00:01:16.953
is a safe procedure.

32
00:01:16.953 --> 00:01:20.290
According to a report published in 2018

33
00:01:20.290 --> 00:01:22.700
by The National Academies
of Science, Engineering,

34
00:01:22.700 --> 00:01:25.780

and Medicine, legal abortions
in the United States

35
00:01:25.780 --> 00:01:28.570
whether by medication,
aspiration, dilation

36
00:01:28.570 --> 00:01:32.570
and evacuation, or induction
are safe and effective.

37
00:01:32.570 --> 00:01:34.820
This comprehensive report
details the evidence

38
00:01:34.820 --> 00:01:37.050
for abortion safety in the United States,

39
00:01:37.050 --> 00:01:40.760
and outlines geographic
inequities in abortion access.

40
00:01:40.760 --> 00:01:43.340
There's a link to this
report below this video.

41
00:01:43.340 --> 00:01:45.230
When we compare the safety of abortion

42
00:01:45.230 --> 00:01:47.710
with something as routine
as receiving penicillin

43
00:01:47.710 --> 00:01:49.280
or a colonoscopy,

44
00:01:49.280 --> 00:01:52.570
we see that the risk of
death is lower for abortion.

45
00:01:52.570 --> 00:01:54.760
Likewise, compare the
risk of abortion with that

46
00:01:54.760 --> 00:01:57.460
of pregnancy, and we
see a tenfold increase

47
00:01:57.460 --> 00:01:58.960
and risk of mortality.

48
00:01:58.960 --> 00:02:01.710
Next I will discuss techniques
for procedural abortion

49
00:02:01.710 --> 00:02:05.900
in the first trimester,
specifically uterine aspiration.

50
00:02:05.900 --> 00:02:08.214
Some other common names
for this procedure include

51
00:02:08.214 --> 00:02:11.800
D&C, which is short for
dilation and curettage,

52
00:02:11.800 --> 00:02:14.233
and surgical abortion
in the first trimester.

53
00:02:15.180 --> 00:02:17.160
I will now discuss medication abortion

54
00:02:17.160 --> 00:02:19.640
since a more detailed discussion
is given by my colleague

55
00:02:19.640 --> 00:02:21.040

in another module.

56
00:02:21.040 --> 00:02:23.610
There are two methods for
performing aspiration abortion

57
00:02:23.610 --> 00:02:25.670
in the first trimester.

58
00:02:25.670 --> 00:02:27.870
The same procedure can
also be used to manage

59
00:02:27.870 --> 00:02:31.140
early pregnancy loss,
otherwise known as miscarriage.

60
00:02:31.140 --> 00:02:34.830
Manual uterine aspiration
or MUA as it is commonly

61
00:02:34.830 --> 00:02:38.940
referred to an electric
uterine aspiration, or EUA,

62
00:02:38.940 --> 00:02:41.840
both generate suction to
aspirate the pregnancy

63
00:02:41.840 --> 00:02:43.000
from the uterus.

64
00:02:43.000 --> 00:02:45.010
And both have been shown
to have similarities

65
00:02:45.010 --> 00:02:46.890
and complication rates, pain,

66

00:02:46.890 --> 00:02:49.750
and patient and provider satisfaction.

67
00:02:49.750 --> 00:02:51.983
The MUA, the device seen on the left,

68
00:02:51.983 --> 00:02:54.880
has the advantage of
being quiet, portable,

69
00:02:54.880 --> 00:02:56.930
and not requiring electricity.

70
00:02:56.930 --> 00:02:58.320
This method was first developed

71
00:02:58.320 --> 00:03:00.040
for use in low resource settings

72
00:03:00.040 --> 00:03:01.870
with high rates of septic abortion,

73
00:03:01.870 --> 00:03:04.620
and allows for treatment of
septic and incomplete abortion

74
00:03:04.620 --> 00:03:07.860
quickly and safely in low
resource clinical settings.

75
00:03:07.860 --> 00:03:10.350
While it was developed for
urgent and emergent clinical

76
00:03:10.350 --> 00:03:13.121
situations, the MUA has
also been adopted for use

77
00:03:13.121 --> 00:03:16.080

in higher resource settings
such as the United States

78
00:03:16.080 --> 00:03:18.470
for abortion and miscarriage management.

79
00:03:18.470 --> 00:03:20.650
Given it's ease of use and portability,

80
00:03:20.650 --> 00:03:23.280
it is commonly safely used
in both the outpatient

81
00:03:23.280 --> 00:03:25.430
and emergency room department.

82
00:03:25.430 --> 00:03:29.010
The EUA, seen on the right,
is larger, makes more noise,

83
00:03:29.010 --> 00:03:30.720
and requires electricity.

84
00:03:30.720 --> 00:03:32.760
But has the advantage of
allowing for a shorter

85
00:03:32.760 --> 00:03:35.480
procedure time in some circumstances,

86
00:03:35.480 --> 00:03:38.290
and for the aspiration of large volume.

87
00:03:38.290 --> 00:03:40.491
Sharp curettage for
first trimester abortion,

88
00:03:40.491 --> 00:03:43.840
more commonly referred to

as D&C is an older method

89
00:03:43.840 --> 00:03:45.490
of surgical abortion.

90
00:03:45.490 --> 00:03:47.800
This is a practice, while
common in some parts

91
00:03:47.800 --> 00:03:50.360
of the world, that has been
found to be detrimental

92
00:03:50.360 --> 00:03:51.950
to a patient's future fertility,

93
00:03:51.950 --> 00:03:53.760
and places them at a two to three times

94
00:03:53.760 --> 00:03:55.820
higher risk for more complications

95
00:03:55.820 --> 00:03:58.032
than the simple aspiration procedure.

96
00:03:58.032 --> 00:04:01.570
In addition, curettage has
been shown to be slower,

97
00:04:01.570 --> 00:04:03.440
and associated with increased blood loss

98
00:04:03.440 --> 00:04:05.450
compared to aspiration.

99
00:04:05.450 --> 00:04:07.520
The World Health Organization has stated

100

00:04:07.520 --> 00:04:09.430
that sharp curettage is less safe

101
00:04:09.430 --> 00:04:11.880
than aspiration abortion, and considerably

102
00:04:11.880 --> 00:04:13.360
more painful for women,

103
00:04:13.360 --> 00:04:15.573
and therefore aspiration
should replace D&C.

104
00:04:16.600 --> 00:04:19.360
Regardless of which
aspiration device you use,

105
00:04:19.360 --> 00:04:21.500
the technique for the
first trimester abortion

106
00:04:21.500 --> 00:04:23.590
follows these basic steps.

107
00:04:23.590 --> 00:04:25.350
Step one is counseling,

108
00:04:25.350 --> 00:04:27.970
use shared decision making
to determine the patient's

109
00:04:27.970 --> 00:04:30.600
desires about continuing the pregnancy.

110
00:04:30.600 --> 00:04:33.730
Counsel the patient about first
trimester abortion options,

111
00:04:33.730 --> 00:04:36.330

and obtain informed consent.

112
00:04:36.330 --> 00:04:39.100
Once a patient has chosen
aspiration abortion,

113
00:04:39.100 --> 00:04:41.360
step two is history and physical.

114
00:04:41.360 --> 00:04:43.970
Permanent medical and surgical
history should be gathered

115
00:04:43.970 --> 00:04:46.150
to ensure a safe procedure.

116
00:04:46.150 --> 00:04:48.080
Providers may use menstrual history,

117
00:04:48.080 --> 00:04:50.810
and by manual examination,
or an ultrasound

118
00:04:50.810 --> 00:04:52.680
to estimate gestational age.

119
00:04:52.680 --> 00:04:54.730
While ultrasound is most commonly used

120
00:04:54.730 --> 00:04:56.660
for dating in the United States,

121
00:04:56.660 --> 00:04:58.640
routine ultrasound is now required

122
00:04:58.640 --> 00:05:01.230
for provision of safe aspiration abortion.

123

00:05:01.230 --> 00:05:03.410
But is recommended in
patients with uncertain

124
00:05:03.410 --> 00:05:07.030
last menstrual period,
indeterminate pelvic exam,

125
00:05:07.030 --> 00:05:08.930
size, dates, discordance,

126
00:05:08.930 --> 00:05:12.140
and in cases of suspected
ectopic pregnancy.

127
00:05:12.140 --> 00:05:15.340
Step three is the
administration of medications.

128
00:05:15.340 --> 00:05:16.860
This may include antibiotics

129
00:05:16.860 --> 00:05:19.190
and pain and sedation medications.

130
00:05:19.190 --> 00:05:21.270
Pain and sedation medications can be given

131
00:05:21.270 --> 00:05:23.513
either orally or intravenously.

132
00:05:24.460 --> 00:05:26.240
Step four is placing the patient

133
00:05:26.240 --> 00:05:27.960
in dorsal lithotomy position,

134
00:05:27.960 --> 00:05:30.560
and performing a bimanual

exam to determine

135
00:05:30.560 --> 00:05:33.730
the shape, size, and
flection of the uterus.

136
00:05:33.730 --> 00:05:36.230
Optimal positioning includes
aligning the patient

137
00:05:36.230 --> 00:05:39.640
hips to just beyond the edge of the table.

138
00:05:39.640 --> 00:05:42.310
For patients with excess
weight, ensuring the hips

139
00:05:42.310 --> 00:05:44.170
are beyond the edge of the table,

140
00:05:44.170 --> 00:05:46.140
and that the sacrum is
at the edge of the table

141
00:05:46.140 --> 00:05:48.760
can further optimize positioning.

142
00:05:48.760 --> 00:05:51.072
Steps five begins the procedure.

143
00:05:51.072 --> 00:05:54.340
The cervix is cleansed with Betadine,

144
00:05:54.340 --> 00:05:57.240
local anesthesia is given
with a para-cervical block,

145
00:05:57.240 --> 00:06:00.590
and a tenaculum is placed

to stabilize the uterus.

146
00:06:00.590 --> 00:06:03.770
If needed, the cervix is
dilated with rigid dilators

147
00:06:03.770 --> 00:06:06.500
with progressively increasing diameters.

148
00:06:06.500 --> 00:06:07.720
This step may be eased

149
00:06:07.720 --> 00:06:09.693
with cervical priming if appropriate.

150
00:06:10.770 --> 00:06:13.610
Step six is aspiration
of the uterine content

151
00:06:13.610 --> 00:06:15.207
with suction canula.

152
00:06:15.207 --> 00:06:17.920
Intraoperative ultrasound
guidance can be used

153
00:06:17.920 --> 00:06:19.280
if available and desired

154
00:06:19.280 --> 00:06:21.880
to help ensure a complete procedure.

155
00:06:21.880 --> 00:06:24.640
It is most commonly used
for more challenging cases

156
00:06:24.640 --> 00:06:27.000
such as extremely flexed uteri,

157
00:06:27.000 --> 00:06:30.180
distorted endocervical,
and endometrial canals,

158
00:06:30.180 --> 00:06:32.500
and uterine anomalies.

159
00:06:32.500 --> 00:06:35.280
Step seven is clinical
confirmation of completion

160
00:06:35.280 --> 00:06:37.760
of the procedure based on tactile feedback

161
00:06:37.760 --> 00:06:41.340
from the uterus, and
ultrasound findings it views.

162
00:06:41.340 --> 00:06:43.590
The products of conception
should be evaluated

163
00:06:43.590 --> 00:06:45.380
for completeness as well.

164
00:06:45.380 --> 00:06:48.290
Pregnancy tissues
including gestational sack,

165
00:06:48.290 --> 00:06:50.870
chorionic villi, and/or fetal tissue

166
00:06:50.870 --> 00:06:52.290
should be identified depending

167
00:06:52.290 --> 00:06:54.600
on the gestational age of the pregnancy.

168

00:06:54.600 --> 00:06:58.060
Steps eight and nine are
observation after anesthesia

169
00:06:58.060 --> 00:07:00.240
and post abortion care instruction

170
00:07:00.240 --> 00:07:02.800
including contraception if desired,

171
00:07:02.800 --> 00:07:04.850
antibiotics if still needed,

172
00:07:04.850 --> 00:07:06.920
and rhogam if indicated.

173
00:07:06.920 --> 00:07:08.820
Stay tuned to the end of this video

174
00:07:08.820 --> 00:07:10.520
if you would like to view an animation

175
00:07:10.520 --> 00:07:11.873
of this simple procedure.

176
00:07:13.200 --> 00:07:16.030
In the United States, infection
after induced abortion

177
00:07:16.030 --> 00:07:18.920
is rare, less than 1%.

178
00:07:18.920 --> 00:07:21.020
This is due to the routine administration

179
00:07:21.020 --> 00:07:23.390
of prophylactic antibiotics.

180

00:07:23.390 --> 00:07:26.870
Infection rates vary
from five to 20% in those

181
00:07:26.870 --> 00:07:28.940
not given antibiotics.

182
00:07:28.940 --> 00:07:30.860
There is no change in infection risk

183
00:07:30.860 --> 00:07:34.100
with immediate post
abortion IUD insertion.

184
00:07:34.100 --> 00:07:36.170
Randomized control trial support the use

185
00:07:36.170 --> 00:07:38.371
of prophylactic antibiotics pre-procedure,

186
00:07:38.371 --> 00:07:41.290
and there is evidence showing
that universal prophylactic

187
00:07:41.290 --> 00:07:43.820
antibiotics is cost effective.

188
00:07:43.820 --> 00:07:46.430
There is also evidence
demonstrating that post procedure

189
00:07:46.430 --> 00:07:49.690
antibiotics may be just as
effective as pre-procedure,

190
00:07:49.690 --> 00:07:51.400
but pre-procedure is preferred.

191
00:07:51.400 --> 00:07:53.821

Doxycycline is the first
line antibiotics of choice

192
00:07:53.821 --> 00:07:56.730
by major medical associations.

193
00:07:56.730 --> 00:07:59.410
Historically, Doxycycline
was preferred because

194
00:07:59.410 --> 00:08:02.460
it was inexpensive,
equally effective orally

195
00:08:02.460 --> 00:08:06.460
or by IV, and rarely
caused allergic reactions.

196
00:08:06.460 --> 00:08:09.110
However, azithromycin and metronidazole

197
00:08:09.110 --> 00:08:11.210
are reasonable alternatives.

198
00:08:11.210 --> 00:08:14.620
In our practice, we give 500
milligrams of azithromycin

199
00:08:14.620 --> 00:08:16.163
orally pre-procedure.

200
00:08:17.275 --> 00:08:20.560
Adequate cervical dilation
reduces the risk of uterine

201
00:08:20.560 --> 00:08:23.600
perforation and cervical laceration.

202
00:08:23.600 --> 00:08:26.530

Most providers in North
America use rigid dilators

203
00:08:26.530 --> 00:08:28.740
with progressively increasing diameters

204
00:08:28.740 --> 00:08:31.060
for cervical dilation
without pre-procedure,

205
00:08:31.060 --> 00:08:33.570
cervical priming, or preparation.

206
00:08:33.570 --> 00:08:36.140
This is done because the
risk of uterine perforation

207
00:08:36.140 --> 00:08:37.580
or cervical laceration

208
00:08:37.580 --> 00:08:40.130
with first trimester suction aspiration

209
00:08:40.130 --> 00:08:42.710
is very small, and the cervical priming

210
00:08:42.710 --> 00:08:45.230
is associated with it's
own set of side effects

211
00:08:45.230 --> 00:08:47.650
including discomfort and
additional inconvenience

212
00:08:47.650 --> 00:08:48.583
for the patient.

213
00:08:49.510 --> 00:08:52.210
If cervical preparation is necessary,

214
00:08:52.210 --> 00:08:55.520
in North America misoprostol
is most commonly used.

215
00:08:55.520 --> 00:08:57.960
Misoprostol is administered
one to four hours

216
00:08:57.960 --> 00:09:00.580
prior to the procedure to prime the cervix

217
00:09:00.580 --> 00:09:02.960
depending on the gestational
age of the pregnancy

218
00:09:02.960 --> 00:09:05.350
and other patient characteristics.

219
00:09:05.350 --> 00:09:07.890
In our practice we use the
society of family planning

220
00:09:07.890 --> 00:09:09.560
guidelines which have been adapted

221
00:09:09.560 --> 00:09:12.490
from The World Health
Organization which state:

222
00:09:12.490 --> 00:09:14.910
Consider cervical priming for all people

223
00:09:14.910 --> 00:09:16.960
younger than 18 years old.

224
00:09:16.960 --> 00:09:19.890
Nulliparous people greater than 11 weeks.

225
00:09:19.890 --> 00:09:21.990
All people greater than 13 weeks,

226
00:09:21.990 --> 00:09:24.440
and others with prior cervical surgery

227
00:09:24.440 --> 00:09:26.950
or atypical cervical anatomy.

228
00:09:26.950 --> 00:09:29.700
Now you will see an animation
of the uterine aspiration

229
00:09:29.700 --> 00:09:32.843
procedure from cervical
anesthesia through aspiration.

230
00:09:33.969 --> 00:09:37.052
(lighthearted music)

231
00:09:38.710 --> 00:09:40.660
- [Instructor] The speculum
is carefully placed

232
00:09:40.660 --> 00:09:43.250
to visualize the cervix
encouraging the patient

233
00:09:43.250 --> 00:09:45.313
to keep their pelvic muscles relaxed.

234
00:09:47.870 --> 00:09:50.060
The cervix and vaginal
tissue are then swabbed

235
00:09:50.060 --> 00:09:51.950
with an antiseptic solution.

236

00:09:51.950 --> 00:09:54.180
Placement of local anesthesia is critical

237
00:09:54.180 --> 00:09:56.930
in decreasing discomfort
during the procedure.

238
00:09:56.930 --> 00:09:59.510
It reduces pain from
cervical manipulation,

239
00:09:59.510 --> 00:10:01.790
and dilation, and may decrease pain

240
00:10:01.790 --> 00:10:02.973
from uterine cramping.

241
00:10:04.220 --> 00:10:06.600
The anatomy of the
cervix is often described

242
00:10:06.600 --> 00:10:08.950
as a clock base with the anterior portion

243
00:10:08.950 --> 00:10:10.850
of the cervix being 12 o'clock,

244
00:10:10.850 --> 00:10:13.460
and the posterior lip being six o'clock.

245
00:10:13.460 --> 00:10:15.680
The cervix is innervated
by nerves that come

246
00:10:15.680 --> 00:10:17.760
from the lowest portion of the spinal cord

247
00:10:17.760 --> 00:10:20.680
which enter the cervix adjacent

to the uterine arteries

248
00:10:20.680 --> 00:10:22.790
at three o'clock and nine o'clock.

249
00:10:22.790 --> 00:10:24.650
The fundus is innervated by nerves

250
00:10:24.650 --> 00:10:27.200
that come from a higher
area of the spinal cord

251
00:10:27.200 --> 00:10:29.590
via the inferior hypogastric nerve

252
00:10:29.590 --> 00:10:32.400
which enters along with
the uterosacral ligaments,

253
00:10:32.400 --> 00:10:34.300
and via the ovarian arteries.

254
00:10:34.300 --> 00:10:37.190
The uterosacral ligaments
attach to the lower uterus

255
00:10:37.190 --> 00:10:39.310
at five and seven o'clock.

256
00:10:39.310 --> 00:10:42.120
At the planned location
of the tenaculum placement

257
00:10:42.120 --> 00:10:44.540
which is usually the
anterior lip of the cervix,

258
00:10:44.540 --> 00:10:47.160
or 12 o'clock, the clinician should inject

259
00:10:47.160 --> 00:10:51.730
two to five CC of local anesthesia
into the cervical stroma.

260
00:10:51.730 --> 00:10:54.870
She then places the tenaculum
in the cervical stroma

261
00:10:54.870 --> 00:10:57.240
at the desired location, taking care

262
00:10:57.240 --> 00:11:00.340
not to grasp too
superficially before placing

263
00:11:00.340 --> 00:11:02.460
the paracervical block.

264
00:11:02.460 --> 00:11:05.560
The anesthetic block can be
done in a number of ways,

265
00:11:05.560 --> 00:11:07.720
it is possible to inject both the nerves

266
00:11:07.720 --> 00:11:09.650
as they enter with the uterine arteries,

267
00:11:09.650 --> 00:11:13.023
and the nerves as they enter
via the uterosacral ligaments.

268
00:11:14.560 --> 00:11:17.430
One approach is actually
an intracervical block,

269
00:11:17.430 --> 00:11:20.040
in which half the anesthetic

is injected at a depth

270
00:11:20.040 --> 00:11:22.000
of approximately three to four centimeters

271
00:11:22.000 --> 00:11:24.310
at three o'clock, and half at nine o'clock

272
00:11:24.310 --> 00:11:27.250
into the cervix to reach
the paracervical plexus

273
00:11:27.250 --> 00:11:29.600
adjacent to the uterine arteries.

274
00:11:29.600 --> 00:11:31.690
With this approach, it is possible to use

275
00:11:31.690 --> 00:11:34.800
two additional injections
at five and seven o'clock

276
00:11:34.800 --> 00:11:38.380
towards the plexus adjacent
to the uterosacral arteries.

277
00:11:38.380 --> 00:11:40.370
If all four sides are used,

278
00:11:40.370 --> 00:11:42.920
three, five, seven, and nine o'clock,

279
00:11:42.920 --> 00:11:45.833
the total anesthetic amount
should be distributed equally.

280
00:11:46.880 --> 00:11:48.857
The second block shown
here is a commonly used

281
00:11:48.857 --> 00:11:51.900
paracervical block which
places equal amounts

282
00:11:51.900 --> 00:11:54.320
of anesthetic, usually five milliliters

283
00:11:54.320 --> 00:11:55.900
at each of four sides,

284
00:11:55.900 --> 00:11:59.260
two, four, eight, and 10 o'clock.

285
00:11:59.260 --> 00:12:02.270
This distributes the anesthetic
around the paracervical

286
00:12:02.270 --> 00:12:04.750
plexus while avoiding injecting directly

287
00:12:04.750 --> 00:12:06.053
into the uterine arteries.

288
00:12:06.950 --> 00:12:08.810
The needle enters behind the cervix

289
00:12:08.810 --> 00:12:11.310
where the vagina reflects off the cervix,

290
00:12:11.310 --> 00:12:13.010
and the injections are continuous

291
00:12:13.010 --> 00:12:16.320
from superficial to deep
at three centimeters.

292
00:12:16.320 --> 00:12:17.990

There is no clear evidence supporting

293
00:12:17.990 --> 00:12:19.870
one type of block over another,

294
00:12:19.870 --> 00:12:22.630
except that deeper injections
may be more effective

295
00:12:22.630 --> 00:12:25.250
than superficial ones,
and injecting slowly

296
00:12:25.250 --> 00:12:27.020
causes less pain.

297
00:12:27.020 --> 00:12:30.350
Additionally, a higher volume
of anesthetic is preferred.

298
00:12:30.350 --> 00:12:31.630
Keeping in mind that the dose

299
00:12:31.630 --> 00:12:33.743
has to be in the non-toxic range.

300
00:12:34.900 --> 00:12:36.480
It's important to make sure the needle

301
00:12:36.480 --> 00:12:39.590
is not in a blood vessel
when injecting lidocaine.

302
00:12:39.590 --> 00:12:42.260
Once the needle is the
planned location and depth,

303
00:12:42.260 --> 00:12:44.070
the clinician pulls back on the plunger

304
00:12:44.070 --> 00:12:46.130
to check for blood flow with the syringe.

305
00:12:46.130 --> 00:12:49.030
She will reposition the needle
if there is blood returned.

306
00:12:50.370 --> 00:12:52.340
Once local anesthetic is placed,

307
00:12:52.340 --> 00:12:55.660
cervical dilation must be
either confirmed or achieved.

308
00:12:55.660 --> 00:12:57.830
It is critical at this
point to begin to use

309
00:12:57.830 --> 00:13:00.260
a no-touch technique
in which the clinician

310
00:13:00.260 --> 00:13:02.210
ensures that all instruments
that passed through

311
00:13:02.210 --> 00:13:05.210
the cervical os are sterile,
by not allowing parts

312
00:13:05.210 --> 00:13:07.200
of the instruments that
will enter the uterus

313
00:13:07.200 --> 00:13:10.390
to touch anything before reaching the os.

314
00:13:10.390 --> 00:13:12.810

The clinician could first
test to see if the desired

315
00:13:12.810 --> 00:13:16.370
cannula passes through the os
without additional dilation.

316
00:13:16.370 --> 00:13:19.570
Cannulas are sized by
diameter, and most clinicians

317
00:13:19.570 --> 00:13:21.820
choose a diameter equal
to the number of weeks

318
00:13:21.820 --> 00:13:24.360
gestation, or one size smaller.

319
00:13:24.360 --> 00:13:27.570
For example, a seven week
pregnancy can be aspirated

320
00:13:27.570 --> 00:13:30.100
safely and effectively
with a seven millimeter

321
00:13:30.100 --> 00:13:32.550
or six millimeter cannula.

322
00:13:32.550 --> 00:13:34.380
Holding the end of the
cannula that will not

323
00:13:34.380 --> 00:13:36.920
go through the cervix,
she pulls gentle traction

324
00:13:36.920 --> 00:13:40.470
on the tenaculum to straighten
the cervical uterine angle.

325
00:13:40.470 --> 00:13:42.900
She then tries to pass
the canula through the os,

326
00:13:42.900 --> 00:13:44.790
and advance it to the fundus.

327
00:13:44.790 --> 00:13:47.453
If successful, she could
begin the aspiration.

328
00:13:48.510 --> 00:13:50.660
If the cannula does not
pass through the os,

329
00:13:50.660 --> 00:13:53.003
the clinician will begin
to dilate the cervix.

330
00:13:54.110 --> 00:13:56.110
You can see in this
video that the clinician

331
00:13:56.110 --> 00:13:58.357
is using prat dilators which are tapered

332
00:13:58.357 --> 00:14:02.050
and have increasing sizes
of dilation on each end.

333
00:14:02.050 --> 00:14:04.810
She uses proper no-touch
technique by holding

334
00:14:04.810 --> 00:14:07.130
the midpoint of the dilator
so that she does not

335

00:14:07.130 --> 00:14:09.430
touch either end that
will go into the uterus.

336
00:14:10.500 --> 00:14:12.890
The clinician will pull
gently on the tenaculum

337
00:14:12.890 --> 00:14:15.540
to straighten the cervical uterine angle.

338
00:14:15.540 --> 00:14:17.670
She then carefully passes the dilators

339
00:14:17.670 --> 00:14:19.420
through the cervix to the point at which

340
00:14:19.420 --> 00:14:21.690
the widest portion of the
dilator passes through

341
00:14:21.690 --> 00:14:23.260
the internal os.

342
00:14:23.260 --> 00:14:25.720
The tip of the dilator
need not, and should not

343
00:14:25.720 --> 00:14:27.530
reach the fundus.

344
00:14:27.530 --> 00:14:29.500
The clinician removes the dilator,

345
00:14:29.500 --> 00:14:33.610
flips it, and passes the larger
end through the cervical os.

346
00:14:33.610 --> 00:14:36.220

The clinician then inserts
the next sized dilators

347
00:14:36.220 --> 00:14:39.090
one at a time until reaching
the level of dilation

348
00:14:39.090 --> 00:14:41.013
necessary to pass the cannula.

349
00:14:41.930 --> 00:14:44.300
Notice how the dilators rotate in her hand

350
00:14:44.300 --> 00:14:46.460
as they traverse the cervical canal.

351
00:14:46.460 --> 00:14:48.760
It is important to allow
the dilator to follow

352
00:14:48.760 --> 00:14:51.960
the natural path of the canal,
and not to force it through

353
00:14:51.960 --> 00:14:54.760
which may lead to perforation
or false passages.

354
00:14:54.760 --> 00:14:58.180
Dilators are used to open
the cervix just enough

355
00:14:58.180 --> 00:14:59.505
to pass the cannula.

356
00:14:59.505 --> 00:15:02.780
Dilators are sized by either
diameter or circumference,

357

00:15:02.780 --> 00:15:05.300
whereas cannulas are sized by diameters.

358
00:15:05.300 --> 00:15:08.200
Become familiar with the
dilators you have available

359
00:15:08.200 --> 00:15:10.923
to know what size will
accommodate each cannula.

360
00:15:12.100 --> 00:15:14.830
Once the flexible or rigid
cannula of the appropriate

361
00:15:14.830 --> 00:15:17.040
size passes through the internal os,

362
00:15:17.040 --> 00:15:20.140
and is located at the fundus,
the cannula is attached

363
00:15:20.140 --> 00:15:22.763
to either the MUA or the EVA tubing.

364
00:15:24.330 --> 00:15:27.170
The manual uterine aspirator
is similar to a large

365
00:15:27.170 --> 00:15:30.450
syringe with a cylinder,
plunger, and valves.

366
00:15:30.450 --> 00:15:32.910
Closure of the valves allows
creation of the vacuum

367
00:15:32.910 --> 00:15:36.160
by pulling outward on the
plunger into the locked position.

368
00:15:36.160 --> 00:15:38.250
Suction should be created in the syringe

369
00:15:38.250 --> 00:15:41.160
before it's attached to
the cannula if the cannula

370
00:15:41.160 --> 00:15:42.930
is already in the uterus.

371
00:15:42.930 --> 00:15:45.190
Many clinicians first place the canula

372
00:15:45.190 --> 00:15:48.230
in the uterus, generate
suction in the syringe,

373
00:15:48.230 --> 00:15:50.829
and then attach the
syringe to the cannula.

374
00:15:50.829 --> 00:15:53.330
With the cannula inside the uterus,

375
00:15:53.330 --> 00:15:55.853
suction is generated when
the valves are released.

376
00:15:57.130 --> 00:15:59.040
Once the vacuum is activated,

377
00:15:59.040 --> 00:16:02.050
the cannula is maneuvered in
the uterus with the combination

378
00:16:02.050 --> 00:16:04.180
of rotation, and in and out movements

379
00:16:04.180 --> 00:16:06.293
between the fundus and internal os.

380
00:16:07.200 --> 00:16:09.420
When the syringe fills,
your tissue stops entering

381
00:16:09.420 --> 00:16:12.210
the syringe, she removes
it to empty the syringe,

382
00:16:12.210 --> 00:16:14.180
and reactivate the suction.

383
00:16:14.180 --> 00:16:16.080
Sometimes a small amount of tissue

384
00:16:16.080 --> 00:16:18.940
can block suction by
clouding the cannula opening.

385
00:16:18.940 --> 00:16:21.053
Often this tissue is a gestational sack,

386
00:16:21.053 --> 00:16:23.250
a sterile gauze can be used to wipe

387
00:16:23.250 --> 00:16:27.070
the cannula clean, keeping
the tissue for evaluation.

388
00:16:27.070 --> 00:16:29.440
A safe place to keep the
sterile end of the cannula

389
00:16:29.440 --> 00:16:31.150
is back inside the uterus.

390

00:16:31.150 --> 00:16:34.440
While the syringe is emptied
and suction reactivated.

391
00:16:34.440 --> 00:16:36.330
Keeping the tip of the cannula sterile

392
00:16:36.330 --> 00:16:37.620
through use of the sterile gauze,

393
00:16:37.620 --> 00:16:39.260
and safe storage in the uterus,

394
00:16:39.260 --> 00:16:41.080
or on a sterile part of your tray

395
00:16:41.080 --> 00:16:43.493
is crucial for proper no-touch technique.

396
00:16:44.830 --> 00:16:46.420
Once the uterus is empty,

397
00:16:46.420 --> 00:16:48.400
the clinician can feel a gritty texture

398
00:16:48.400 --> 00:16:49.940
along with the feeling that the uterus

399
00:16:49.940 --> 00:16:51.740
is contracting around the cannula

400
00:16:51.740 --> 00:16:53.960
as it becomes harder to move the cannula.

401
00:16:55.120 --> 00:16:57.610
Once the aspiration is
felt to be complete,

402

00:16:57.610 --> 00:16:58.970
the tenaculum is removed,

403
00:16:58.970 --> 00:17:01.280
and the cervix examined for bleeding.

404
00:17:01.280 --> 00:17:03.570
A small amount of bleeding
at the tenaculum side

405
00:17:03.570 --> 00:17:05.953
is normal, and usually
resolves with pressure.

406
00:17:07.790 --> 00:17:09.522
With electric vacuum aspiration,

407
00:17:09.522 --> 00:17:11.520
the basic steps are the same,

408
00:17:11.520 --> 00:17:13.380
but suction can be continued throughout

409
00:17:13.380 --> 00:17:16.030
without needing to take
breaks to empty the container,

410
00:17:16.030 --> 00:17:18.040
and reactivate suction.

411
00:17:18.040 --> 00:17:19.890
Once the suction is activated,

412
00:17:19.890 --> 00:17:21.660
it is controlled by opening and closing

413
00:17:21.660 --> 00:17:23.820
the valve on the tubing hole.

414
00:17:23.820 --> 00:17:26.190
Once the canula is advanced to the fundus,

415
00:17:26.190 --> 00:17:28.680
the hole is closed, and the
cannula can be maneuvered

416
00:17:28.680 --> 00:17:31.370
through twisting and in and out movements.

417
00:17:31.370 --> 00:17:34.440
As the canula is brought down
towards and out of the cervix,

418
00:17:34.440 --> 00:17:36.560
suction can be released
by opening the valve

419
00:17:36.560 --> 00:17:39.200
on the tubing hole, and then
re-advance to the fundus

420
00:17:39.200 --> 00:17:40.463
to repeat the procedure.

421
00:17:41.580 --> 00:17:44.570
Like with MUA, once the
material stops coming out,

422
00:17:44.570 --> 00:17:47.110
and the texture of the cannula
against the endometrium

423
00:17:47.110 --> 00:17:49.820
feels gritty, the procedure is complete.

424
00:17:49.820 --> 00:17:51.540
If the texture feels smooth,

425
00:17:51.540 --> 00:17:53.690
it may be that the
uterus is not yet empty,

426
00:17:53.690 --> 00:17:55.740
or that the cannula is clogged.

427
00:17:55.740 --> 00:17:57.570
In this circumstance, it is important

428
00:17:57.570 --> 00:17:59.220
to look at the end of the cannula

429
00:17:59.220 --> 00:18:01.260
to remove possible clogged tissue,

430
00:18:01.260 --> 00:18:03.570
and then repeat the steps.

431
00:18:03.570 --> 00:18:06.620
- In summary, we have
learned that many people

432
00:18:06.620 --> 00:18:09.400
will experience abortion
in their lifetime.

433
00:18:09.400 --> 00:18:11.330
The vast majority of abortions occur

434
00:18:11.330 --> 00:18:14.720
before 12 weeks gestation
in the United States,

435
00:18:14.720 --> 00:18:15.870
and that complications

436
00:18:15.870 --> 00:18:18.240

from first trimester abortions are rare.

437
00:18:18.240 --> 00:18:21.160
Abortion techniques
utilizing aspiration methods

438
00:18:21.160 --> 00:18:23.773
are superior to sharp curettage.

439
00:18:23.773 --> 00:18:25.780
Sharp curettage should not be performed

440
00:18:25.780 --> 00:18:27.590
for abortion due to it's higher raise

441
00:18:27.590 --> 00:18:30.460
of complication, pain, and blood loss.

442
00:18:30.460 --> 00:18:33.330
And the surgical procedure
for uterine aspiration

443
00:18:33.330 --> 00:18:37.050
in the first trimester is a
simple and safe procedure.

444
00:18:37.050 --> 00:18:40.417
For more information, please
visit innovating-education.org.